In July we celebrate our independence and bring awareness to WHS.

Recently the Hedgehog Welfare Society designated the month of July as WHS Awareness Month. WHS, or Wobbly Hedgehog Syndrome, is a neurological disease common to hedgehogs. Its primary symptom is progressive paralysis. Among North American pet hedgehogs this disease is second only to cancer as a cause of hedgehog deaths.

In this issue we have supplemented our regular features with a full spectrum of articles designed to increase awareness of WHS including: Caring for hedgehogs with WHS, participating in research efforts, the debate over whether WHS is or is not a genetic disease, and some touching memorials to well-loved pets who have succumbed to this devastating condition.
Wobbly Hedgehog Syndrome: A Genetic Disease?
By Pat Storm & Donnasue Graesser

Part 1: by Pat Storm

For a number of years now, the battle has been raging about whether Wobbly Hedgehog Syndrome (WHS) is or is not genetically passed in hedgehog family lines. A few people point out that “the gene hasn't been found, and thus it doesn't exist.” I decided to look at this from a different angle to support the theory that just because we have not isolated the WHS gene or genes, it doesn't mean that the possibility doesn't exist that genetics could be a real factor.

Let's look at hip dysplasia in dogs. This degenerative disease was first described early in the 20th century. The only way to diagnose this disorder is by X-ray of the affected animal. The X-ray is something tangible that can be seen before the animal is dead and needs a necropsy. Unfortunately in hedgehogs with WHS, there is no way to confirm the diagnosis until the hedgehog dies and a histopathological examination of the tissues of the central nervous system (brain and spinal cord) can be performed. There is a consistent degeneration of this tissue, thus showing us that WHS is a real disease. We also find that WHS can be traced back through family lines, when they are known.

For years people have known that hip dysplasia in dogs is an inherited problem. For generations they have seen this problem manifest itself. Even today, there is no genetic test for hip dysplasia, because the gene or genes have not been isolated. Does this mean it does not exist? I think over the years, evidence has supported the fact that it does exist. As one of the major human companions, dogs get far more research into their health problems than our hedgehogs do. And, yet, there is no "proof" of hip dysplasia being genetic, other than the fact that it continues to be passed along in familiar lines. The gene or genes for hip dysplasia have not been isolated.

I think that many of the people who deny that WHS is a real problem have either never dealt with the disease and hope that by ignoring the facts they may never have to. Or, there are those who would rather ignore that WHS exists in order to keep up with supply and demand for hedgehogs, regardless of the damage they may be doing to future animals. Those breeders do not have to deal with the problem if they sell off animals before they come of age to develop WHS, or if they simply do not deal with it and use euthanasia as an easy way to deal with a sick animal. Then they can continue to deny that WHS is in their animals.

We can look at human genetics in the same light. We know some diseases are genetic because we have identified the specific genes responsible and tests have been devised which can indicate someone who may have a tendency to develop these conditions and diseases. BUT there are also a lot of diseases found in families for which the gene has yet to be identified. Human genetics gets, by far, the most attention. In time, who knows, we may know how to test a newborn to find out what diseases or conditions to watch for, or we may even be able to treat some diseases before they ever materialize.

Our animal companions may, someday, be as blessed. But, for now, progress in companion animal research runs far behind research on humans. Our hedgehogs are far down on the research priority list. But as research is done and discoveries are made in human genetics, some of that knowledge may be used in the dog and cat research. As this happens, our hedgehogs can also reap in the harvest of knowledge.

We are very lucky to have some very dedicated people researching the hedgehog WHS plight. As we all learn more, we can all apply our new knowledge. In the meantime, we must work with what knowledge we now possess. Just because we cannot point at the gene and say “that is the one that causes WHS,” it does not mean that the gene does not exist. If we do so we might as well deny that such examples as hip dysplasia exist. There are laboratories working on isolating the hip dysplasia gene and developing a genetic test. Do the research yourself - it is very interesting and enlightening. Just because you can't see it (now), doesn't mean it doesn't exist.

Part 2: by Donnasue Graesser

Pat's very insightful article brings up the very intriguing question: Is Wobbly Hedgehog Syndrome (WHS) a genetic disorder? As most of you know, this question has been the subject of debate for years, and probably will continue to be so for many more years.

One web-site suggests that because WHS is a “leukencephalopathy” it is likely to be an infectious disease, such as progressive multifocal leukencephalopathy (PML) in humans, which is caused by an infectious virus. The fact is leukencephalopathy is simply a pathological term, describing degeneration or damage to the myelinated white matter of the brain (leuko = white; encelphalo = the grain; pathy = a disease or abnormal condition). The presence of leukencephalopathy is a clinical sign in countless number of disorders in humans and animals. The presence of leukencephalopathy does not indicate any specific etiology for the pathology.

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Some possible causes of leukoencephalopathy are toxins, radiation, autoimmunity, infectious agents, and numerous genetic conditions.

Even within “genetic” causes of leukoencephalopathies, there are metabolic disorders (defects in the genes or enzymes involved in metabolic pathways), dysmyelinating diseases (defects within the genes that code for the structural proteins of myelin), lysosomal storage diseases, and others. There are over 40 documented lysosomal storage diseases alone.

Can we “prove” that WHS is an inherited (genetic) disorder or that it is an infectious disease? At this point, there is no definitive proof either way. But, both options have been explored and continue to be explored. Thus far, scientific research supports the hypothesis that WHS is at least in part an inherited disorder, but there is no support that it is an infectious disease. This does not mean that either hypothesis is true or not true, just that the data we have currently only supports one hypothesis. As research evolves, we will gain new knowledge, and perhaps new perspectives, regarding WHS.

What evidence supports that WHS is an inherited/genetic condition?

The first indication scientists have that any disorder or trait is an inherited condition is that the trait occurs more frequently in related individuals (parents/offspring/siblings) than in the general population. If a hedgehog is found to have WHS, an examination of the pedigree (if known) shows that there is a higher incidence of WHS in the family line. For an example, see the pedigree in Figure 1 (Graesser, Spraker, Dressen, Gardner, et al). In the general hedgehog population, the occurrence of neurological signs is 10-12% (according to Hedgehog Mortality and Longevity Database for the years 1995-2005). Approximately 7% of these cases have been documented to have true WHS lesions by postmortem histopathology. However, in the family line presented in Figure 1, the occurrence of progressive neurologic signs is 53%, more than four times greater than would be expected in the general hedgehog population for the same time period. And, if only definitively diagnosed cases are taken into account, the percentage of confirmed WHS hedges is more than triple (26%) what would be expected. Pedigree analysis on more recent family lines has shown an even higher degree of WHS within specific family lines.

This pattern of inheritance becomes obvious, even to an untrained person. It becomes especially obvious when you have been breeding, and realize that almost all the offspring of your prize breeding pair are developing WHS, despite the fact that the babies are geographically separated and raised in separate households, with various care and diet routines. Figure 2 illustrates the geographic distribution of three generations of hedgehogs in another family line affected by WHS. Each color symbol indicates a distinct generation. As you can see, these cases of WHS are not linked by location, diets, living conditions, etc. The only connection between these hedgehogs is their genes. The cases were submitted independently to the WHS research study, and the family connections were established over several years. It should be noted that all the hedgehogs in this illustration had progressive neurologic signs, but not all were definitively diagnosed.

Figure 1. Pedigree of a family lineage with WHS


Note: Alas, it is hard to create a map of the United States

Figure 2. Distribution of WHS Hedgehogs

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Might WHS be caused by an infectious agent?

Infectious agents, such as prions, viruses, and bacteria, are "contagious," meaning they are passed from one individual to another either directly or indirectly. For example, if one student in a classroom contracts the chicken-pox virus, chances are some other kids will catch it as well. There has never been a reported case of WHS being transmitted amongst cage-mates, hedgies handled by those caring for WHS hedgies, at hedgehog shows with several WHS hedgies in attendance, or any unrelated hedgehogs. I will put a disclaimer here to say that some diseases are not easily contracted (e.g. HIV virus), so it is possible that closer contact is required for transmission of WHS if it is an infectious disease.

In addition, the pathological evidence does not support the hypothesis that WHS is a transmitted agent. No infectious agents have been observed or isolated from tissues of WHS hedgehogs. Also, generally, an immune response is evident in the tissues if there has been invasion by a virus or bacteria. No immune infiltration is obvious in the tissues of WHS hedgehogs. Perhaps further and more specific examination of the tissues will reveal an infectious agent, but none have been noted by any of the several pathologists who have reported WHS cases.

Is it possible that WHS is both genetic and infectious?

At this point, any scenario could be a possible cause of WHS, including that WHS is ultimately caused by an infectious agent in hedgehogs with a genetic predisposition to infection by that agent. Viruses must attach to receptors on the cells they infect. These receptors are coded for by genes, which are specific amongst individuals and/or species. For example, only humans carry the gene for the CD4 receptor for the HIV-1 virus, and therefore dogs, cats, hedgehogs, etc. cannot be infected by this virus, as they do not carry this gene. In addition, there are some individuals who possess a mutated gene for the HIV co-receptor, CCR5, and therefore cannot be infected and develop AIDS. Genes for viral receptors are critical for susceptibility to a virus. So, it is possible that WHS is caused by a virus, but that only certain family lines carry the genes for the receptor necessary for that virus to infect.

It is also possible that what we interpret as “genetic transmission” in family lines is actually vertical transmission of a virus. Vertical transmission is when a virus is passed from mother to offspring, and can mimic an inherited pattern of disease. If this were the case, the virus has a lengthy incubation period, as some animals do not display clinical signs until many years after they have been weaned and separated from their mothers.

In either of the above scenarios, it would still be wise to avoid breeding of hedgehogs that are related to WHS hedgehogs.

The puddle

The fact is, we still do not know the exact cause of Wobbly Hedgehog Syndrome. The data collected strongly suggests that it is, at least in part, an inherited condition. Many of you have heard my “gas puddle” analogy, but I’ll repeat it for those who haven’t. Consider if you were standing up to your ankles in a puddle of clear liquid (and holding your dear hedgie in your hands). You can’t smell the liquid, so you have no idea what it is, but you are told that the liquid is either gasoline or water. Now, you are handed a lit match. You have the choice to blow out the match, or throw the lit match into the puddle. By blowing out the match, you have nothing to lose or gain. However, there is a chance that throwing the lit match into the puddle can cause irreparable harm to your hedgehog, yourself, and anyone in the surrounding area. If I were given this choice, even though I am not sure what is in the puddle, I would not take the chance. I would blow out the match.

Sure, we are not absolutely certain whether WHS is genetic or not. But, let’s say you are presented with a hedge from a WHS line. You have the choice to breed this hedgehog or not. By “not” breeding the hedgehog, you have nothing to lose or gain. However, there is a chance that if you breed that hedgehog, it will cause irreparable harm to the hedgehog offspring, as well as devastation to their guardians. Even though I cannot say with 100% certainty that WHS is genetic, I would not take the chance. Would you?
Animal cruelty is a familiar topic for many of us. Educated by shows like Animal Cops and local media attention, most have learned that there are legal standards for the treatment of animals.

What sometimes escapes notice are the many barriers, both legal and practical, to the enforcement of animal cruelty laws and the ways in which these laws fall short of truly protecting animals. This article will highlight some of these barriers and weaknesses.

Reporting: Who Even Knows?
Reporting is sometimes the most problematic aspect of enforcing animal cruelty charges. Unlike humans who experience abuse, animals do not have access to teachers at school, co-workers, and often are even sheltered from friends and neighbors. Also, unlike doctors, veterinarians in most states are not required to report potential animal abuse to authorities. Vets have argued that mandatory reporting would prevent abusers from seeking veterinary care and that in any case, the ethics of the veterinary profession require reporting. It is difficult, if not impossible, to estimate the amount of animal abuse that is never punished because it is never seen.

Treatment by Authorities: Why Waste Resources?
A Rock County, Wisconsin woman, who was arrested on suspicion of neglecting 39 hamsters and who was later charged with neglecting a Great Dane, was cleared recently when District Attorney David O’Leary said “It’s a waste of judicial resources to prosecute her further regarding rodents.” Interestingly, Wisconsin's anti-cruelty statutes clearly cover mammals, including rodents. Unfortunately, this disregard and ridicule is not uncommon in cases of animal cruelty crimes. Even though society and the legislature have determined that animal abuse should be against the law, the realities of limited resources and flooded courts prevent abusers from being prosecuted to the full extent of the law.

Cruel, or Mentally Ill?
Unfortunately, some cruelty towards animals is the result of untreated mental illness. It's commonly known that people who abuse people often abuse pets, and that serial killers may start with neighborhood pets. What isn't as commonly understood is that another common act of cruelty, hoarding, is also likely to be the result of mental illness. After studying the phenomenon of animal hoarding in the 1990's, most mental health professionals now believe that animal hoarding is a symptom of obsessive compulsive disorder, and can be treated medically and with counseling.

While the suffering of animals at the hands of hoarders is undeniable, the question becomes whether we should punish those guilty of the offense with jail time and heavy fines, or, instead, help them find treatments and therapists to overcome their illness. It is a particularly difficult question when the offender is a “kindly old lady” who was just trying to give the “poor animals” a home. Like it or not, no one likes to send an old lady to jail. That said, mental illness doesn’t give criminals a “get out of jail free” card. An estimated 1 in 3 inmates suffers from mental illness.

What Can You Do?
These are just a few issues that can prevent the reporting and punishment of animal cruelty. Organizations such as the Humane Society of the United States, and the Animal Legal Defense Fund work with lawmakers and local prosecutors to help strengthen laws and prosecute offenders. By seeking out these organizations and signing up for email notices, or participating in a movement to contact legislators about proposed laws, you can help to push the law in the right direction.

You can also help by working with animals who have been neglected or abused. You might agree to adopt or foster homeless animals, or even volunteer at an animal rescue a few days every month. If time is short, you can always support rescue organizations (like the Hedgehog Welfare Society, of course!) through gifts of money.
It might seem like an easy question at first glance. Biology teaches us that an animal is any creature falling into the Animal Kingdom, including birds, dogs, fish, insects, lizards, frogs and, of course, hedgehogs. Simple, right?

Well, it’s not as simple as you might think. This article will take you through some of the problems the courts run into when defining “animal” in animal protection cases, how this has hurt animal welfare in the past, and what legislative measures have been able to do about it.

Let’s look at an animal cruelty statute to see where things can get confusing. In Wisconsin, the animal cruelty statute says, “No person may treat any animal, whether belonging to the person or another, in a cruel manner.” This language works just fine when we’re dealing with a case of someone kicking a dog. But what about someone who flushes a dying fish down a toilet? Are you breaking the law when you squash a mosquito (remember, insects are biologically animals)? What about fishing for Muskies with minnows? Is the person who slaughters a chicken for food for her family breaking the law?

Strange results! Fortunately, as Americans have brought their pets indoors and begun investing more emotionally and monetarily in their care and welfare, the laws have begun to catch up. Several states now have laws that protect all domesticated animals from acts of cruelty and some that allow for the owner to sue animal abusers for more than the “fair market value” of the animal. Recently, lawmakers have passed a federal law outlawing animal fighting which will impose harsher penalties for those who engage in this cruel hobby. Thus dogs, cats, birds, lizards and even chickens are finally being thought of as animals, at least in some circumstances.

Ruby Tuesday 2007

The 5th annual Ruby Tuesday Sale at Ruby’s Rescue Shop will be held on Tuesday, July 31, 2007.

Join the tradition of supporting a special hedgehog cause by shopping on Ruby Tuesday. This year’s chosen cause is Hedgies for the Cure: United Against WHS. All proceeds from sales made on Ruby Tuesday will be used to support Wobbly Hedgehog Syndrome research efforts.

Ruby Tuesday Specials include:

• FREE SHIPPING on any purchases made on July 31 (12:01-midnight, EST)
• Special free gifties included with all orders.
• New, unique items available.
• One special shopper will be chosen at random to win a free 2008 WHS hedgie calendar.

Stop by Ruby’s Rescue Shop anytime to purchase featured “turquoise ribbon” items to benefit Hedgies for the Cure.
All of us who have cared for or known a hedgehog with WHS, know that these extraordinary little ones have a phenomenal strength of spirit that is difficult to express in words. The following memorials were written by guardians who have loved and been loved by WHS hedgehogs.

Thistle - Guardian, Jane Karr

I would like to honor my beloved Thistle who went to the Rainbow Bridge November 11, 2005.

Thistle was a rescue who had been mistreated and dumped because she suffered from WHS. I was the lucky individual who got the call to have the honor of caring for her. She was in a very sorry state. Although she was full grown she was no bigger than a baby. And even though she had suffered much at the hands of humans, she was the sweetest, kindest, brightest light I have ever encountered. I immediately took her to our wonderful vet who got Thistle back on the road to a happier life. The darling couldn't even feed herself she was so weak. For three months I bonded with this beautiful girl, feeding her by bottle and syringe. I awoke that awful morning and found my most precious girl had passed in her sleep. I cannot tell you how she changed my life. I now have twelve wonderful hedgies, most are rescues and I am a rescuer. Thistle will be remembered in every pair of hedgie eyes I look into and every little hedgie wiggle walk that I see. She truly was and is the light of my life.

Rocky H. Hedgehog - Guardian, Marie Kuhlman

I would like to add my Hedgie (and baby boy) Rocky to the Memorial. He passed on May 1st, 2007. He was a little over 4 yrs old. He is very missed. His girlfriend Amy Lee misses him. He was given a very nice funeral. I still go around the house catching myself calling his name. My son was as crazy about Rocky as I am. He told me he is in a better place and we will see him again. We love you Rocky H. Hedgehog.

Spice - Guardian, Krystal Ross

I didn't have Spice for very long but he was an amazing hedgehog and brought joy to me for the six months I had him, when I got him he about 2 or 3 years old. He is very missed. His girlfriend Amy Lee misses him. He was given a very nice funeral. I still go around the house catching myself calling his name. My son was as crazy about Rocky as I am. He told me he is in a better place and we will see him again. We love you Rocky H. Hedgehog.

Odo - Guardian, Billy League

Odo lived with me only for four short years. I miss her today as much as I did when she crossed the rainbow bridge. I can't think of Odo without tears falling relentlessly. She was very bright, very curious and had a very determined attitude that I liked to call an "Odotude." If she didn't get her way, she would get mad and scream at me. She would come when called during freedom time, always expecting, and receiving, treats. She was very smart. She knew her name, would run and hide upon hearing water being ran in the bathroom sink, hating bath time. She would bully the other female hogs I had during freedom time, always getting her way. Odo was my first hedgehog and my first rescue. She came from a pet shop where she was being beaten up all the time by a bigger female. Little Odo was only about 4 or 5 months old when I got her. I took her out of that cage and fell in love. I now have twelve wonderful hedgies, most are rescues and I am a rescuer. Thistle will be remembered in every pair of hedgie eyes I look into and every little hedgie wiggle walk that I see. She truly was and is the light of my life.

Pringle - Guardian, Denise Ciattea

I would like to include my Pringle in this tribute. I bought Pringle from a pet shop. He was my first hedgehog and I didn't know how to choose between him and his brothers and sisters. He was the most spunky of the bunch in his tank that he was kept in, so that made my decision easy. He was so tiny. He was three when I had to put him to sleep due to rapidly progressing WHS symptoms. He never grew much larger than the length of my hand. He had a wonderful life with us and was spoiled greatly. His favorite food was scrambled egg, but oddly, he did not like mealworms. Pringle loved his wooden house that my step-dad made for him. His name was carved into it. I entered Pringle in a local pet parade and we made the front cover of a local newspaper. He loved to play with toilet paper tubes and other boxes and toys I had for him. He was such a sweet baby and I will always be proud that I was his mommy.
I’ve been blessed to care for four hedgehogs with WHS - each of them has been loving, sweet, and strong, and they all seemed to be accepting of their health challenges.

Miss Pepper was both my first rescue hedgehog and my first with WHS. She came to me sometime after her third birthday, from a semi-neglectful living situation. Although she faced many health challenges (malnutrition, mites, endometriosis) during her time in my care, Miss Pepper was always cooperative, alert, and friendly. She spent her nights in her own habitat, because she was on a special diet, but her days were spent in a shared habitat with several other hedgehogs. When morning came, Miss Pepper would be at the door of her habitat, ready to be moved in with her friends, and when I placed her into the group habitat she would sit for a minute, sniffing the air, and then make a bee-line for where the other hedgies had chosen to sleep for the day - she’d burrow in amongst the other hedgies, until she was at the very center of the pile, give a small sigh, and promptly fall asleep. Even when she lost her mobility and could only pull herself around by her front legs, she was bound and determined to get to the center of the sleeping hedgies - and they’d shift themselves to make room for her, sniffle her ears, and then wrap themselves around her. I’ll always remember Miss Pepper like this - surrounded by her friends in warmth and love.

My precious little girl, Emma Rose, was a beautiful, curious, tenacious soul. Emma came to me when she was about six-months' old - the WHS was already evident and she had a lack of coordination and weakness in her back legs, and she was blind in her left eye where she’d been quilled by a littermate. Those challenges didn't stop Emma, though - every night I’d hear her little feet pitter-pattering around her habitat as she ran laps. (She was too unsteady to use a wheel.) I set-up a lined and padded “run” for her, which helped her stay up-right, and once she started moving she didn’t stop; in fact, if she did stop, she tended to fall over. I had to syringe-feed Emma, as she was too unsteady to eat on her own (she’d fall face-first into her food), and she ate with gusto - when her hunger was satiated, Emma would put up a paw and push away the syringe, and then she’d start wriggling in my hands and wouldn’t stop until I put her back into her habitat so she could run. Although she was always curious and loved to explore, Emma didn’t do well with other hedgies, as she liked to burrow under them and then flip them onto their backs, so she lived in a habitat where she could see the other hedgies but wasn’t allowed free-time with them without supervision. During her last weeks with me, Emma went from being vibrant and active to being still and calm - she’d fall asleep in my hands. When we had to help her cross the bridge, much of the staff at our vet’s office came into the room to say goodbye and many had tears in their eyes. Emma Rose was an incredible creature and I’ll forever be thankful that she came into my life.

Little Miss Molly was the mother of Emma Rose (and of several other hedgies with WHS). Molly was an avid wheeler and tuber and refused to sit for more than a minute - there were too many things than needed to be smelled and investigated! She lived with several other hedgehogs during her time with me, but the love of her life was Artie, whom she bossed around. If he got up during the day for a snack or a bathroom trip, Molly would follow him and nudge him back to the pigloo, where he slept on his side and she snuggled into his stomach. Thankfully, Molly’s WHS progressed slowly, and she only lost her mobility in the last few weeks of her life. She’d been so active that it was obvious that she was miserable with not being able to move. One of Molly’s funniest quirks was that she didn’t like to use the doorway opening for pigloos; instead, she usually chose to enter and exit by going under the edge of the enclosure - the photo shows her doing just that!

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Miss Penelope (aka Miss Penny), was Molly’s half-sister, and we weren’t sure that she had WHS, as she had only very early signs. Penny was another small, active hedgehog, who wheeled and wheeled and wheeled. She didn’t much care for being held and cuddled, she’d rather be running around, sniffing, and burrowing under things. Her favorite place to explore was a pile of clothes (clean or dirty) - she’d clamber about halfway up a pile and then dive into the midst a few minutes later her face would pop-out somewhere and then she’d duck back in and be off again. Little Penny loved living with other hedgies and was great with otherwise huffy and antisocial hedgehogs. Her last habitat-mate was Miss Wren, a grumbly hedgehog more than twice her size - Wren would follow Miss Penny around the habitat, sniffing at her feet and ears, and licking her face. The two of them, even though they had three wheels in their habitat, always took turns on one wheel - Penny’d start wheeling and Wren would wait until she slowed, then put her paw onto the wheel to bring it to a stop. Then Penny would jump off and Wren would get on - Penny would watch her for a moment and then move to another wheel and as soon as Wren saw that her friend was gone, she’d leap off the wheel and run to find her. Penny developed fast-growing stomach tumors and had to be helped to cross the bridge - we sent her body for necropsy because of her relationship to Miss Molly (who’d been confirmed to have WHS), not because she was showing any significant signs. The necropsy confirmed that Miss Penny had very early WHS. Miss Penny had been bred and one of her daughters now lives with Standing Bear at the Flash and Thelma Memorial Hedgehog Rescue. Wren, Penny’s companion, greatly misses her friend and is increasingly withdrawn and grumpy, but that will be rectified as a social hedgie about her age is coming to live with us and hopefully the two will become fast friends. In the meantime, both of us mourn the loss of Miss Penny, an adorable, charming, and delightful companion.
Hedge-A-Saurus came to me through some friends who are active in rabbit rescue — he'd been surrendered to them by his previous humans who'd grown tired of caring for him. Thanks to conflicting stories, we really don't know much of his history. What we do know is that by the time he came into my care he was suffering from kidney failure and had typical WHS symptoms. A necropsy later confirmed that he had WHS. This little guy was with me for only three months, but in that short span of time he found a forever place in my heart. Although he had many health problems, Hedge-A-Saurus was always alert, curious, and affectionate — and he tolerated his various treatments and exams with rarely a huffle or grumble. I am saddened that I wasn't able to do more for this precious soul, but will always be thankful to have cared for him.

Last fall Simba stopped wheeling. Soon thereafter he could not stand without toppling over. We did a round of Prednisone which had no effect. Around Christmas, he would no longer no longer eat or drink so I began syringe feeding. He was also moved to a basket which stayed at my side of the bed with a heating disk and a heater to keep the disk warm.

All was status quo until about 7:00 on the evening of March 16th. He no longer wanted food and could barely keep his eyes open. He was unresponsive to touch - we didn't expect him to last the night. But he did and was better than the night before. However, he could only take 1 1/2 syringes of baby food that morning which again left him weak and unresponsive. The same thing happened at his noon feeding. Just eating that small amount of food wore him out.

I consulted with Dr. Phyllis Dressen and Dr. Terry Spraker at Colorado State University. Dr. Dressen was preparing to leave on vacation the next day but she agreed to meet us at her office at 2:30.

On March 17, 2005 at approximately 2:45 PM, Simba was helped over the Rainbow Bridge by Dr. Dressen.

She immediately took Simba to CSU where the necropsy was done by Dr. Spraker minutes after Our Simba had crossed. Performing the necropsy and collecting the sample so soon after death was probably very helpful to the WHS researchers.

We will miss you sweetie and I especially will miss your beautiful legs. I know you are running races and frolicking at the Rainbow Bridge with your new legs. I know you chose to leave on this St. Patrick's Day because it made you even more special than you already were. God-speed our little leprechaun. We love you and will see you someday.

Love, Mom and Dad

Herbie and Safiyya Pearl - Guardian, Gioia Kerlin

A Letter from Herbie-

My name is Herbie, and I was very special to my mom for lots of reasons. I was a rescue hedgehog that came to live with her in April 2005. I used to live in a not-so good place where I didn't have enough to eat or a wheel to play on, and somehow I lost one of my back legs there. I don't remember how it happened—I lived with guinea pigs who were VERY hungry too, and I also had to try to get around in a wire-mesh house. It was very hard to move in that house, because my wee feet kept falling through the floor. So maybe I hurt my leg while walking in that house, or maybe the piggies chewed on it. I was so scared that I don't remember, and I don't like to think about it anymore. But I came to live with my new mom, and I liked my life here with The Herd. The first night I was really scared—mom put me into my new home and I ran as fast as I could to hide behind my wheel and chew on my blankies. But then she gave me hedgehog food (instead of hay and guinea pig food) and that made me feel better. I started to feel so good and so brave that I got myself into trouble sometimes. Even though I only had three legs I escaped from my house with ease, and one night I was feeling lonely, so I climbed out of my sterilite and went walking into mom's office to find her. Another time mom had me sitting peacefully in a chair, but my friend Pi was out running around on the floor, and I wanted to go see him. So I drew in my breath, closed me eyes, and plunged to the floor. Most hedgehogs seem to come out of a nose-dive in pretty good shape. They roll into a ball and just bounce. Not me. I plummeted straight down, head first. Mom was very upset with me, and my head hurt for a while afterwards, too. But she gave me lots of meal worms, and I ate them all up. I guess I just did things without thinking. Mom said I liked to live on the edge, whatever that means. I often got to go meet people with mom. We went to schools to teach kids about hedgehogs and other animals, and sometimes mom took me to the university classes she teaches. I was a great hedgehog ambassador. I was calm, happy and I didn't mind new people and smells. I was also special to mom because I was so soft—my tummy was very fluffy and with only one back leg, you could feel it resting in the palm of your hand when you held me. I loved meal worms, kisses, free range time, my wheel, and lap snuggles. I ran so much that mom would call me Herbie Derbie, so