LIGHTING THE WAY

The Official Newsletter of the Bearded Collie Foundation for Health

VOLUME VII
ISSUE II
Fall, 2006

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Reflections
Elsa Sell

It has been a very long dry and hot spring and summer in Georgia, as well as elsewhere. In June we had to feed hay to the cattle, which is extraordinary, since that doesn't usually happen until November.
Drought has advantages though – there is less grass to mow, you can leave implements outside for weeks on end without fear of rain causing rust and ruin, drought tolerant desert-like plants look great, and there are fewer bugs.

Speaking of bugs, you'll find several articles on the topic in this newsletter. If bugs don't interest you, the topic of posterity may.

Once upon a time I asked a long time breeder of Beardies for her view on BeaCon's open health registry and if she had considered participating with her dogs. Her answer was: while it is interesting, it does nothing to answer the question of why certain health problems happen and therefore she would not be participating.

In reflection on the breeder's reply, I can understand frustration in not knowing why some diseases occur, although with the efforts in the 90's, we now know

that Addison's disease is inherited in Beardies and some other breeds. In human medicine, untold amounts of money and careers of research scientists have been spent over decades in attempts to identify the "cause" of cancer. Along the way, much has been learned about different cancers, treatment, and in some cases cures for certain forms of cancer. The point being that for Beardie health conditions we'd prefer an answer today or yesterday, yet the data collection and research processes take time and depend upon individual contributions. The permanent documentation of health problems or wellness, and health screening tests results will provide a foundation for study by succeeding generations.

For Posterity
(Excerpts taken from an article written by Rhonda Hovan and originally published in the Golden Retriever News)
By Permission

My Dad grew up on a farm, and farmed for a living as a young man. His first three daughters spent their early childhood on the farm, but I was not so lucky, because my Dad had moved his young family to the city by the time I was born. Still, it's probably true that you can take the boy out of the country, but you can't take the country out of the boy – at least in my Dad's case. Our city lot was double deep, and we were the only family in the neighborhood that had rows of corn and other vegetables instead of a lawn in the backyard.

My Dad also introduced me to rescue. Except in our case, the rescues were not dogs, and one never knew what critter my Dad would bring home next: orphaned baby hawks and owls, a nest of crows from a fallen tree, even an injured snapping turtle. My grandparents taught my Dad when he was very young about responsibility for animals. As a child, one of his chores was to feed and water the chickens before school. One especially cold winter morning, he gave them only water, planning to feed them after school when he hoped it might be warmer. As he sat down to breakfast that morning, his mother placed only a glass of water in front of him, while she served a warm meal to his sisters. When my Dad protested, she calmly but firmly told him that if it was good enough for the chickens, it was good enough for him. He went to school hungry that day – but always cared for the animals properly afterward.

My Dad's sense of responsibility was deeply ingrained, and manifested in many ways. It drove him also to plant trees. Of course, there wasn't much room for trees on our city lot, but he had planted many on his farm. One day when I was in my late 20's, he took my husband and me on an excursion back to his farm. Many years and several owners had come and gone since he'd been there, so he was a stranger to the current residents. But my Dad knocked on the door, introduced himself, and asked if he could show me around the farm.

Curious, but with a little suspicion, the owners tagged along while Dad began my tour. Behind the house stood a stately and sprawling tulip tree, its branches reaching across the lawn like giant protective arms. From the lowest branch some 25 feet in the air, hung a tire swing. "I planted that tree," my Dad told me proudly. He recounted the story of searching the nearby woods for the perfect tree, branched just right; and of digging such a large root ball that he had to drag it on a tarp behind a horse to get it back to the house. He ended by saying, "I knew that someday, that tree would have a swing hanging from it."

By this time, the new owners were smiling and laughing about the hours of fun their children had swinging from that tree. Their suspicion had melted, and we all enjoyed many more stories as we continued to walk around the farm. As we left, they thanked my Dad for the tree, and mentioned that it was a shame the tree had been so small when he sold the farm, that his own children hadn't been able to swing from its branches. "Oh, I knew it wasn't for us when I planted it," my Dad replied. "I planted it for the next person."

Years later, perhaps following a genetic urge passed down from my Dad, I bought my own farm. My family's favorite spot on the farm was a grassy area near the lake, where a mammoth oak shaded a weathered picnic table. One sunny summer afternoon, I was throwing bumpers into the lake for the dogs, while my three sons lunched under the tree. A car pulled up, and an old man slowly emerged and walked over to us. He took in the scene for a quiet moment, and then said, "I planted that tree."

This had been his parents' farm, and Homer shared with us his still detailed memory of finding the perfect tree, branched just right, to plant in this spot, some 60 years before. As they listened to the story of how long it took three brothers to drag the tree across a wide field, one of my young sons marveled, "That was so hard! Why did you do it?"

"I did it for you," Homer answered. My son's concept of time and tree growth was that of a four year old, and his eyes got big. "Did you know me then?" he quizzed this stranger, who looked like he must be someone's grandfather. With twinkling eyes, Homer answered, "I didn't know you, but I knew you would make good use of the tree."

My Dad passed away several years ago, and Homer followed shortly thereafter. My children are grown now, and I have since sold that farm; and there is a new generation of children picnicking under Homer's oak, and swinging from my Dad's tulip tree. In time, the stories about how those trees came to be where they are will fade, but the trees themselves remain as evidence that someone cared. I think that would be enough for both of these men.

The generations pass even more swiftly in dogs. A decade can see three or more generations of dogs. A couple of generations of breeders can even come and go in a decade. What kinds of responsibility do we who breed today, have to those who will come after? Are we supposed to be planting trees?

One way the next generation – people we will never meet, never speak to – can tell we cared about our breed, is from the paper trail we leave. But despite all of their best intentions toward the dogs, there is a tendency for breeders to overlook the importance of a paper trail. The most common example of this is that many breeders who diligently have eye, heart, patella, thyroid, and other examinations and DNA tests performed on their dogs, do not certify those examinations and tests with CERF and OFA. Consequently, within a very short time, it is almost as if the information from these examinations ceases to exist for the next generation of breeders – people who will be depending on knowledge of those pedigrees. Without any publicly available documentation, there is no way for anyone to look up data which may impact these future breeders and their dogs. And with the detail, depth, and breath of information potentially available on public Internet databases, this is a sad and needless loss.

Some people feel that certifying clearances is a waste of their money. I suppose that my Dad and Homer could have felt that planting those trees was a waste of their efforts too. But they knew better. Actually, I suspect that both of them thought of it simply as their responsibility. But I prefer to think of it as a gift, and to think of them as men with vision.

Responsibility. Gift. Vision.

Yes, these words can apply to certifying clearances too. Like planting a tree, you do it not for yourself, but for posterity.

Note: (E. Sell). Like planting the trees and certifying health screening tests, please consider participation in BeaCon's open health registry as your responsibility, gift,

and vision for the future of Bearded Collies.

How Genetic Disease Research Succeeds -- Participation

Elsa Sell

I've come across several articles in the scientific literature on how searches for genetic cause of specific diseases have been successful or, made significant progress. Check out this URL for a list of genetic dog diseases with a diagnostic test resulting from cooperation between dog owners and researchers:

http://www.akcchf.org/research/genetic_test.cfm

Fibrodysplasia Ossificans Progressiva (FOP). This is a disease, often fatal, that afflicts a very small number of people. It took over 15 years for a small group of researchers at U. of PA to achieve success. They worked with families from a wide range of geographic locations – the Amazon rainforest, rural Georgia, Bavaria, South Korea. Fundraising efforts within these families' communities collected about 75% of the money used for research on the disease.

FOP is a disease where muscle and connective tissue gradually turn to apparently healthy bone. The result is a freezing of the neck, spine, hips, and even jaw into place – the individual is trapped inside a "second skeleton." The genetic defect is a single DNA base (this is miniscule in relationship to the size of a whole chromosome) on a gene found on chromosome 2.

How did these researchers succeed? First, there was funding. Second, it became evident that the search for the gene slowed down because of wrong turns. At the same time, and it was recognized that this uncommon disease was very rare in families where more than one family member had the disorder, a key to identification of causative genetic mutations. At that point, the primary researcher issued an all point bulletin to doctors worldwide to send families his way. In the end, just 5 families with multiple members provided the critical DNA needed to identify the genetic mutation. The single nucleotide variation identified in them was found in all 50 patients with the disease and it was absent from all 159 controls.

The lesson - a world wide request to physicians who might have contact with families having more than one affected individual resulted in the cooperation of 5 affected families. Analysis of their DNA gave the answer.

Epilepsy in Australian Shepherds.

The following is excerpted with permission from a post to a genetics list by CA Sharp, president of the Australian Shepherd Health & Genetics Institute.

Someone had written a post asking how to find dogs of their breed with a certain health problem. Someone else wrote to try the breeders. CA wrote the following regarding efforts to engage breeders.

That's somewhat dependent on the culture within your breed. I spent years running up against Ostriches, who want to pretend there is no problem, and battling Incorrigibles, who wanted to shut me up. It took a decade for Aussie breeders to wake up and smell the coffee burning regarding epilepsy in our breed. Long enough for it to become our #1 health problem.

But it was a trio of dedicated breeders and one pet owner with a severely afflicted dog who finally made most breeders recognize the elephant in the room. Now we are close to having some answers and there's a fundraising effort to pay for the research (through CHF) that is generating a lot of positive response.

If your breed is largely in the hands of breed enthusiasts, then they will be the ones you focus all your effort toward. However, if a large number of dogs are in the hands of pet owners, who often aren't connected to the breed mainstream, then finding them could be the key to getting the samples you need. Early on for us, most of the samples for epilepsy research were submitted by the dogs' anguished owners.

Ultimately, you will need breeder cooperation. Getting the family groups together was almost impossible for us at first, especially getting samples from the sires. Fortunately, the tide turned a couple of years ago and we've gone from fewer than 100 samples to over 1000 and the researchers are confident they are getting close to some answers for us. It took us a long time, but patience, persistence, and a consistent message will pay off eventually.

One of those pay offs for us is a new mindset on the part of a lot of people in our breed. We still have our Ostriches and Incorrigibles, but many people are openly discussing epilepsy and making it a factor in their breeding plans. This attitude shift is going to make dealing with our other health issues much easier.

You may ask – so what does that have to do with Beardies? Folks, we've been at it for around 8 years with research to locate a genetic marker(s) for Addison's disease. How many more years and how many more cases of Addisonian Beardies are there to be before we have an answer**? It depends on both the progress in the research lab and on every Beardie breeder and owner to provide enough and the right (i.e., family) DNA samples.** Say for example, your now deceased popular sire still has frozen semen available. You know that he produced more than one Addisonian dog when bred to different bitches. You know in later generations that Addison's has happened again. You can't know how many of the family members have samples in to the Addison's research project since that information is confidential, and you yourself did nothing to help gather DNA from as many family members as possible. You have not given a straw of the frozen semen to the research project in the belief it couldn't help. Well, guess what? That semen could hold the key to the puzzle. If you contributed a straw of the frozen semen it just might be the beginning of an end to Addison's disease in Bearded Collies. Isn't that enough motivation?

Another example – your very best ever dam produced several Addisonian Beardies when mated to different sires. At least one of the non-affected progeny has produced several Addisonian dogs. You just never got this dam's DNA off to the research project because you do not believe that the disease is genetic. Now she is quite elderly and frail and may soon be gone. Well, consider this? It's been known since 1998 that Addison's disease in Bearded Collies is genetic (Wagner, Bell & Moon, Oberbauer).

Please do a simple cheek swab on your dear elderly Beardie who has produced Addisonian puppies. Then get out and find all the close family members still alive and convince their owners to submit DNA. Make your contribution to elimination of this nasty disease from the dog world. If you don't, well, I may be writing the same article 10 years hence.

Lastly, are you talking about Addison's disease openly in public places with other Beardie owners and breeders? Judging from something related to me by an owner of an Addisonian Beardie, probably not. This owner had gone up to the breeder of the dog at a conformation dog show; they began to talk about how the dog with Addison's was doing just fine and the breeder shushed the owner up and implied it was inappropriate to be talking on that subject in this place. When will the silence end?

Order your DNA kits for the Addison's study today from http://cgap.ucdavis.edu/addison's.htm If you need Dr. Oberbauer's email addy to ask her about sending a semen sample, send me an email.

All things are possible once you make them so. Goethe

News To Use
Elsa Sell

Kidney Failure in Bearded Collies. Be aware that kidney failure is a common lab finding in dogs that are diagnosed as having Addison's disease. The BUN (blood urea nitrogen) will be high in 85%, K (potassium) will be high in 95%, Na (sodium) will be low in 80%, and the urine will be concentrated in 60%.

Clinical findings in dogs with Addison's disease are lethargy or depression in 95%, poor appetite in 90%, vomiting in 75%, weakness in 75%, weight loss in 50%. No clinical sign is specific for Addison's disease. A dog in Addisonian crisis is near or at collapse physiologically and getting correct emergency treatment is necessary to save life. So, if your Beardie or Neardie has the above combination of clinical findings, is critically ill, and lab work suggests **KIDNEY FAILURE,** it is urgent that you tell your vet that Addison's disease occurs in Bearded Collies. There is a diagnostic test for Addison's disease (the ACTH stim test), which should be among the more detailed next round of testing to identify the cause of kidney failure. Also remember that when a dog is critically ill, IV fluids and usually a high dose of steroids will be given to support the cardiovascular system. The only steroid which will not interfere with the ACTH stim test is dexamethasone. Vets who have previously dealt with Addison's disease will usually know this. Others may not know.

If your dog with kidney failure succumbs – please please please - request a necropsy with a careful look at the kidneys, adrenal glands, thyroid gland at least. And, please report your dog's kidney failure and diagnosis to BeaCon's open health registry.

Keeping the Bugs at Bay. (Science, 313: 36-38, July 7, 2006). Until quite recently bug repellant research was focused on products that can provide backyard comfort. Now the need to consider public-health issues is also being given due consideration; e.g., prevention of the spread of West Nile virus and vector-borne diseases such as malaria (in Africa alone 800,000 children die from this malady yearly). Although ample research on vaccines, medicines, and wild insect genetic modification exists, we still remain with the basics for public health problems – insecticides, bed netting, and repellents.

Possible new repellents have been found in both nature and the lab. A few have made it to market. Others may be coming. DEET (N,N-diethyl-meta-toluamide) is the standard to beat. It was invented in 1953, smells bad, melts plastic, and is perceived by many people to be poisonous. It is unclear how it works. Yet at 30% concentrations, DEET drives away a broad spectrum of bugs for up to 8 hours, including the mosquito which carries West Nile virus. Even high concentrations fall short against the mosquitoes which spread malaria and against ticks which spread Lyme disease and Rocky Mountain Spotted Fever. In Iraq, where DEET evaporates quickly, sandflies cause leishmania in US servicemen (and maybe their dogs too).

Psychology plays a role in bug repellent use. As an entomologist at the US Army Medical Center and School in Fort Sam Houston, TX says, "if soldiers are afraid of it (DEET), we need to look for alternatives".

Some research has turned to folk remedies and, it has been found that a few may work. The USDA has shown that many plant oils, including clove, peppermint, geranium, and catnip, may repel mosquitoes. Botanists have known that plants produce compounds to combat pests that might eat them. Entomologists speculate that there may be a chemical spillover effect on those that eat us. Observations include American beautyberry leaves repel biting flies on livestock, natural repellents in millipedes (secrete benzoquinones which in the lab repel insects), and naturally produced repellents by various animals (Auklets on artic islands exude aldehydes that drive off ticks, mosquitos, and kill lice in the lab).

The obstacles between identification of natural repellents and obtaining a marketable product are many. One is that of short lived effectiveness (such as Avon Skin-so-Soft) because the compounds are very volatile and evaporate so need to be frequently/ constantly replaced.

The National Center for Complementary and Alternative Medicine (NCCAM) was created by the U.S. Congress in 1998. A predecessor, the Office of Alternative Medicine (OAM), was begun in 1992 within the office of NIH and a budget of $2 million. In 1997, it was proposed that OAM become an independent center with direct authority to appoint peer-review panels and to award grants. When NCCAM was thus started in 1998 the initial budget was $50 million. The budget in 2005 was $123.1 million.

Its goal was to bring scientific rigor to studies of Complementary and Alternative Medicine (CAM) by the same legislative process used to establish other NIH institutes and centers. It was intended that this new research program would meet the high standards of biomedical research for which NIH is known.

The initial 5 years were spent performing phase III clinical trials of popular herbal medicines and other supplements to learn about their efficacy. The results of clinical trials of St. John's Wort, Echinacea, and saw palmetto have been published. None of these herbal medicines was more effective than the placebo controls. Naturally there has been criticism by spokespeople for the herbal and nutraceutical industries. Furthermore, it seems doubtful that negative trial results will change practices of people who believe in the healing power of natural products and have distrust of physicians, scientists, and the pharmaceutical industry.

While many initial studies focused on clinical trials of botanical products, there has been a shift towards basic research on mechanisms of action, pharmacokinetics of herbal products, drug-herb interactions, and dose optimization. A 2002 survey of more than 31,000 people found that 62% used some form of CAM. The public is using CAM without proof of efficacy or safety, which is why NCCAM funded research is so important. For more:

http://nccam.nih.gov

Why have this info in a dog health newsletter? Because people use CAM for treatment of health problems in their dog. Is it wise? Anecdotally, maybe yes. Scientifically, the answer is still to come. So – be cautious! Science, 313: 301-304, July 2006.

Raw Meat Diets. JAVMA 228, 4, Feb 15, 2006, pp537-542. The authors conducted a prospective study of commercially available raw meat diets for dogs to evaluate bacterial and protozoal contamination. They obtained 240 samples from 20 raw meat diets for dogs, containing beef, lamb, chicken, or turkey; 24 samples from 2 dry dog foods, and 24 samples from 2 canned dog foods. Products were selected from an advertised selection of foods available from a large number of retailers with the assumption that products that were most commonly advertised were those most commonly used by consumers. Each product was purchased commercially on four dates approximately two months apart.

Three samples from each product at each sampling period were evaluated for *E coli*, *Salmonella*, and *Campylobacter*.

None of the raw meat products were accompanied by instructions for thawing or preparation. The raw meat products were received frozen and stored at -20 degrees C until tested. Frozen products were thawed at room temperature in the original packaging for 8-10 hours before sampling (this

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Elsa Sell

This is a new section for the newsletter. Reader input is invited. Read the material and think about why the figures you see are what they are. Send your thoughts, anonymously or not, to E. Sell, 764 Liberty Rd, Milner, GA 30257 (beaconbb@bellsouth.net). We will include your input in the spring 07 newsletter.

Facts and Figures
Part I

CERF Eye Screening. In recent years more Bearded Collies are being CERFed. Even so, never more than 81.2% were normal with a variable percent having hereditary problems. If one takes an average of the percentage of all dogs examined who had hereditary problems, there is a difference before (av 7.3%) and after 2002 (av 12.7). The most common hereditary problem has always been cataracts (see the Fall 05 Newsletter for more details).

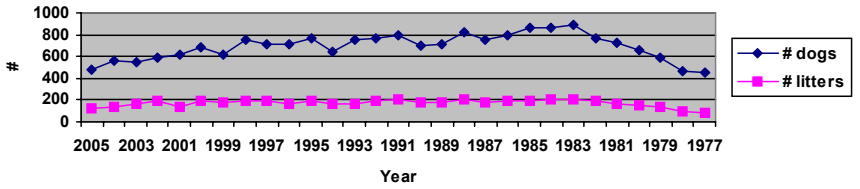
YEAR	TOTAL #	Normal # (%)	Heriditary Problems (%)
2005	202	160 (79.2)	10.9
2004	181	147 (81.2)	8.9
2003	183	129 (71.5)	15.6
2002	157	116 (73.9)	15.4
2001	137	108 (78.8)	7.3
2000	235	161 (68.5)	5.1
1999	286	218 (76.2)	10.5
1998	234	182 (77.8)	4.7
1997	168	129 (76.8)	8.9

Bearded Collie AKC registration statistics. The numbers since joining the AKC registry are shown in the table below. There was a 13.7% decline in the number of dogs registered in 2005 compared to 2004 and a 45.8% decline for 2005 compared to 1983, the year with the highest number of registrations. Likewise, the number of registered litters is in decline – down 16.9% for 2005 compared to 2004 and down 43% for 2005 compared to 1984, the year when 208 litters were registered, the highest of all years. The recent decline has been ongoing since 2002.

Part II

Year	#Dogs	#Litters	Year	#Dogs	#Litters	Year	#Dogs	#Litters	Year	#Dogs	#Litters
2005	485	118	1997	711	196	1989	713	182	1981	723	158
2004	562	142	1996	720	171	1988	817	206	1980	653	156
2003	543	161	1995	762	189	1987	760	177	1979	588	132
2002	587	186	1994	640	160	1986	797	187	1978	472	98
2001	620	142	1993	749	166	1985	858	189	1977	446	89
2000	582	196	1992	766	185	1984	858	208			
1999	614	178	1991	796	203	1983	895	207			
1998	752	188	1990	700	172	1982	763	193			

Number of Bearded Collie Dog and Litter AKC Registrations



I believe these figures should raise serious concerns for the breed. The question is why is the decline happening? Is it temporary or permanent? Will it continue? Are we losing more breeders than we are gaining? Are fewer pups being registered as a percentage of those born? Are fewer pregnancies resulting in live births (i.e., is fertility declining, and if so, why? And where – the sire, the dam, or both)? Given the originally small number of dogs from whence Beardies began in the 50's, and the apparent current decline in the USA registrations, should we have concern for the future of our gene pool as well as the availability of Beardies to those wishing to purchase pups???

AKC announced on 7/31/06 that it is instituting a trial period for a full litter registration application program. The program is available only via a paper application. Participation in this program by every breeder would at least give us information about the total number of Beardies being whelped and alive. Or, more cheaply and certainly more efficiently from the perspective of answering the questions, perhaps now is the time for BCCA and BeaCon to collaborate on a simple data gathering program on pregnancy. This could be done anonymously – with no identification of sire or dam – but with a design to gain much needed information which could answer the questions listed above. Then breeders of the future would be in a better position to address the identified problems with the support of the parent club's leadership.

BeaCon Contests
(BeaCon directors are not eligible to participate.)

Contest 1

The 1000th Beardie to enter BeaCon's open health registry will win a fine prize for his/her owner. There were 860 registered as of late August.

You can access the on-line registry by going to: www.beaconforhealth.org/SQLweb and registering. It is wise to first read a description of the registry at: www.beaconforhealth.org/forms.htm so you can gather the information you need before starting.

Contest 2 – Sponsor OHR Participation

BeaCon is having a contest for six months this fall and winter to encourage participation in the open health registry (OHR). You may be a sponsor is you already have a Beardie in the OHR. The steps are simple. Tell everyone about the contest - friends, attendees at your local Beardie club meetings or Beardie bounces, and your puppy buyers - anyone who owns a purebred Beardie with a known pedigree. They need to either send in hard copy forms for the registry or more quickly, go on-line to register and, submit information. The OHR dog form will have a new "sponsor" field for the contest duration. The new participant must enter your name in the sponsor field; for the on-line system, they will enter just your last name and on the hard copy form, they will enter your full name.

You can track how many new dogs you are sponsoring by going to the report function of the on-line database. Click on the sponsor report to see a list of dogs you have sponsored. When you log in on-line you may see a message that your free use of the search and report functions has expired. If that happens, send an email to the email address given there; Elsa will extend your free report/search function use for the 6 months of the contest. Note: you cannot sponsor new dogs of your own, although you can sponsor new dogs that you co-own when the primary owner enters the dog's information.

To win the prize you must sponsor at least 30 new dogs to the open health registry; the individual with the highest number of sponsored dogs wins. The prize? A high quality Beardie print.

procedure was criticized in a review of the paper). 153 of 288 (53%) samples were contaminated with non-type specific *E coli*. Both raw and prepared foods contained non-type specific *E Coli* during at least 1 culture period. *Salmonella enterica* was recovered from 17 (5.9%) samples, all of which were raw meat products. *Campylobacter* was not isolated from any samples. *Cryptosporidium* (a protozoa) was detected in 3 samples. 10 of the 24 raw meat products contained non-type specific *E coli* at each of the 4 sampling periods.

The bacteria were also recovered from all 4 canned and dry diets during the first sampling period, and from 1 during the second sampling period. It was an unexpected finding that 33% of the dry food samples tested positive for potential pathogens, despite the sterilization methods used in processing conventional diets.

Commentary on the article from other scientists pointed up some shortcomings of the research. One was that there were far more frozen raw meat samples than controls (canned food and dry kibble). Another was the long period of thawing the frozen raw meat samples at room temperature - even so, the thawing process of the sealed packs of raw meat did not cause the bacteria to be there in the first place.

Both the authors and other scientists reinforced the concept that the humans handling these raw diets are at potential risk of acquiring pathogens and that thorough handwashing after handling raw meat diets is important.

Hopefully there will be additional research on the subject. In the meanwhile, if you feed raw meat or are considering doing so, be aware of the potential risk of bacterial contamination. This is notwithstanding the FDA Center for Veterinary Medicine's Guidance for Industry manufacturing raw meat foods for companion and captive non-companion carnivores and omnivores – notably: "all meat- and poultry-derived ingredients should be USDA/FSIS inspected and passed for human consumption". You can read the document at: www.fda.gov/cvm/Guidance/Guide122.pdf

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Cautions and Concerns
Linda Aronson, DVM and Elsa Sell,

MDHealth Problems - Guidance and advice: When your Beardie has a serious health problem, who do you turn to for help? Initially it is usually your regular vet. Some people join Internet lists designed to support owners whose dog have a particular health problem or class of problems. Having participated in these lists, we recognize the value of such support from folks that have already gone through the same crises. Sadly, we have also seen many unwarranted recommendations re changes in therapy or dosing without consulting a vet. We urge you to be very, very cautious about such advice. You want the best treatment for your Beardie and the best information comes from professionally trained individuals. If your vet is out of his/her depth, ask for a referral to a specialist.

Breeding and Addison's Disease - Guidance and advice. How can you best protect yourself from producing Addison's when you breed? Complete pedigree study back 3 or 4 generations may tell you that there has been Addison's in relatives of a proposed mating. If a dog has Addison's, both parents are carriers, although this does not guarantee Addison's will happen with different mates. It must be remembered that Addison's will not be expressed in genetically predisposed dogs unless there is an appropriate trigger. Because there is no genetic test for Addison's yet, **no-one** can predict with absolute certainty where or when Addison's will show up. To attempt to do so is grasping for the proverbial crystal ball. Because autoimmune diseases tend to show up in the same families of dogs, do make sure that sire and dam have healthy thyroids. OFA thyroid is a start, but they will pass dogs below their normal FT4 and over their normal TGaa and cTSH levels, so ask to see the levels too. Do not repeat breedings that have produced Addison's or any other heritable problem, as suggested in the BCCA guidelines. Health cannot be guaranteed; we do our best and hope for the best. It is important, however, that breeders not be so alarmed about Addison's that they stop breeding altogether; (see the article on p8 regarding registration statistics). In the meantime, put your full support behind all efforts to find markers for inherited diseases; provide DNA from as many members of Addison's affected (and healthy) families as possible, and don't forget these projects need out help with funding as well.

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Care of the pregnant bitch and her litter through the first 8 weeks of life Part 1
Linda Aronson, DVM

This two part article is written in response to a number of queries. It is merely a guideline and not meant to be an exhaustive treatise. Nor is it intended to examine the wisdom of breeding a particular bitch, how to achieve this or the thought and planning that should have got us to this point. Suffice it to say that many times puppies will not survive to eight weeks, whole litters may be lost, and in some cases the bitch may die too. Breeding is not for the squeamish or faint of heart. We will assume, however, that our bitch has been bred successfully and at the right time. Perhaps surprisingly, mistiming is still the #1 reason bitches fail to become pregnant.

Pregnancy: It's always a good idea to confirm that your bitch is pregnant. This gives you time to let people know puppies are expected, and you can begin interviewing prospective owners while all is quiet on the home front. There are four ways to confirm pregnancy. The earliest method is ultrasound which can be performed any time after the 24th day after ovulation. It is 100% accurate, and can give you a rough estimate of the number of puppies to expect. It is the best technique for picking up fetal viability, fetal stress and resorption. Abdominal palpation is best done about 28 – 30 days after ovulation. Accuracy very much depends upon who is doing the palpation. Some mistake fecal balls for fetuses. You may get a rough estimate of the number of puppies expected, but many can be tucked up under the rib cage. About the same time the Relaxin test performed with a few drops of blood serum is most accurate. It will merely give a yes-no answer as to whether the bitch is pregnant and offers no information on litter size or viability. Some owners prefer this to imaging or palpation, which they feel may potentially harm the fetuses. Rough palpation is certainly potentially hazardous, but ultrasound appears to be safe. X-rays are also commonly thought to be safe, although I choose not to do them, figuring that if they are not safe for human fetuses why would they be for puppies? Radiology is of no use until mineralization of the bones begins around the 45th day. In the last week, some breeders choose to take an X-ray to determine the number of puppies they are expecting. With large litters, overlapping bones may make it hard to get an exact count. You will hear a lot of breeders say that they "know" their bitch is pregnant because she immediately goes out of season after being bred, her nipples enlarge, or some other acid test – in general these are unreliable. Bitches maintain an elevated progesterone level post ovulation whether or not they are bred. Hormones dictate most of the changes breeders cite, and can as easily mark normal diestrus (approximately 9 week period post ovulation) in an open as in a pregnant bitch, or in a bitch with pseudocyesis (false pregnancy). Another useful piece of information is due date. In the past it was commonly stated that pregnancy could last anywhere from 58 to 71 days. It is now known that almost all pregnancies last 63 days +/- 1 day from the day of ovulation. Of course, if you are not measuring progesterone and or Luteinizing Hormone (LH) that isn't much good, because you won't know when the bitch ovulated! While we are dispelling common myths, puppies of different sizes within the

litter are not due to their being conceived at different breedings. All the eggs are released over about 24 hours, and then float free in the uterus for about 17 days during which insemination occurs and they start to develop. At that point the embryos implant in the uterine wall and form a placenta. Poor placentation is the reason some puppies are smaller than their littermates at birth.

Once pregnancy has been confirmed, it is advisable to keep your bitch at home for the duration of the pregnancy to avoid exposing her to unnecessary stress or sick animals. By home though, I imply normal routines, not that she can no longer take her normal exercise or go on the normal family outings. Many bitches do like to nest and prefer the familiar when pregnant.

Feeding the pregnant bitch is also a matter of much debate. Some authors recommend putting the bitch on a puppy diet when she is expected to come into season, and maintaining her on this for about a year – it has been estimated that it takes 8 months for a bitch to rebuild the nutritional stores she had prior to pregnancy. Then again some people recommend breeding a bitch every season, and as I don't advocate that, and because obese bitches have more problems getting pregnant, maintaining pregnancy and whelping, I advocate for keeping them on their normal food and amounts of food for the first 4.5 to 6 weeks of the pregnancy. They will generally tell you when they need more food, and that is when they need it. (If your bitch always acts like she is starving and yet is in good weight, start to gradually increase ration size around week 5. If on the other hand she always treats food like it's poisoned you may need to get more creative in tempting her palate in the latter half of pregnancy.) Many bitches develop "morning sickness" somewhere between weeks 3 and 5. She turns her nose up at food, especially breakfast, and may even vomit. While some breeders go to extraordinary lengths to get food into their bitches, I generally feel it is better to let her have her way. You can feed more at the evening meal if she is consuming that one with more gusto. Around week 5 her body shape starts to change. This is the right time to increase caloric intake. This should be done gradually. In general, feeding her more of what she normally eats is the best idea. You can add chicken broth, cottage cheese or yogurt, but basically her body's needs are the same – a good source of protein, essential fatty acids, minerals and vitamins – just more of it. It is preferable to increase the number of meals rather than give one or two huge ones. I do not supplement my bitches with herbs during pregnancy. If I were to I would probably choose nettle tea. Often red raspberry leaf is used as it supposedly decreases the pain of uterine contractions and acts as a smooth muscle relaxant. However, it is a uterine stimulant, and should not be given before the last week of gestation to prevent the risk of abortion. This also goes for mugwort, tansy, scotch broom, goldenseal, juniper berry, pennyroyal oil, rue, mistletoe and chaste berry. Black and blue cohosh are also supposed to stimulate labor when given close to the due date, but have been associated with heart failure and shock in human neonates.

Exercise is very important for the pregnant bitch and will help ensure a smooth labor and delivery. Walking and swimming are great, but especially in the last 3 weeks of gestation avoid herding, agility, fly ball etc, as getting over heated, a fall or knock – particularly by an obstreperous sheep – could result in fetal loss.

If your bitch refuses all food for several days, has increased thirst and urination, weakness, wobbly, gait or appears disoriented, and has any vulvar discharge that is not white to colorless seek veterinary advice. The most common problems in a pregnant bitch are diabetes mellitus – because progesterone maintained at high levels during pregnancy can alter the uptake and effect of insulin on body cells – and toxemia – associated mostly with large litters late in pregnancy where compression of the stomach prevents the bitch consuming enough food to maintain herself and her litter. These are not common conditions.

Whelping: As her due date approaches the bitch may find it harder to move around. She may also start nesting. Some bitches are more determined than others. Most of mine like to dig outside under bushes. Other dogs seek out closets or other confined spaces; I had one who thought behind the boiler looked like a great place for a December litter. Some bitches like a favorite chair, or their owner's or even their own bed. Sometimes we can have arguments over the location of the birth, but mostly they accept the whelping box once whelping is under way. I like a whelping box about 4' square so I can get in with my bitch and be involved in the whelping process. Whelping is a very messy business, you can line the box with torn up paper (preferably butt ends from printers as opposed to newsprint which bleeds ink all over you, the bitch and the puppies) or old towels. I prefer the towels. The box should have solid sides about 2' high, with a "door" or lower area to allow the bitch easy access. For the first two weeks or so a "pig rail" to help prevent the bitch crushing puppies in the corners and edges of the box when she lies down is useful.

About a week before your bitch is due trim down the hair around her vulva and over her belly so that it doesn't wrap around her nipples and cut off the milk supply or interfere with birthing. It's a good time to give her a bath and a thorough groom, not forgetting to make sure that her nails are trimmed short. Some breeders will wrap a bitch's tail in Vetwrap for the birth to try and keep the hair clean and out of the way. I haven't found this particularly helpful. Others use bands to tie long hair up with the same intent. Most bitches lose their coat after whelping, and most will end up with a rat tail, which is the last thing to grow back. Some people begin obsessively taking the bitch's rectal temperature four times a day up to 3 weeks before their due date, I usually start once a day about a week before she is due, increasing to twice a day about 3 days before the due date. However, I also know when my bitches ovulated, if you don't it's a good idea to start further out. In most bitches the rectal temperature drops below 98 degrees about 8 to 24 hours before whelping, it then rises again as she enters labor. She will also likely go off her food at this time.

As well as having the whelping box set up and introducing your bitch to it, it's time to assemble your other supplies. The technologically minded breeder, and those who are anticipating possible difficulties because the bitch or her dam experienced dystocia or needed a C-section before (I won't get into a discussion of this here, but personally I would like our breed to be free-whelping and would discourage breeding bitches with anticipated problems) may want to rent an external fetal monitor. Two companies that provide this service are WhelpWise 1-888-281-4867 or www.whelpwise.com and WhelpWatch 1-888-200-8044. I've never used a monitor; others wouldn't have a birth without one.

Things I like to have on hand include: Lots of clean towels (birth is a very wet and messy business), a stethoscope, sterilized scissors, a bulb syringe, Karo Syrup, a bowl of water, an acupuncture needle or 25 gauge hypodermic needle, dental floss (I have used it once); a pad and pen to jot down notes about the delivery, time, presentation of the placenta, markings, sex and weight of the puppy (I have a baby scale, you can use any small scale); a good book (this can be a long process) and a ready box – I use an old cooler chest without the lid, lined with clean towels and a heating pad. While it is expensive I also like to have a frozen supply of hyperimmune plasma and feeding tubes and syringes in case I have a puppy that fails to thrive or perhaps did not receive adequate colostrum (first antibody rich milk). There will be more on this in part two. Some breeders use a dilute iodine solution on the umbilical cords, I don't.

Your veterinarian's number and that of an emergency clinic are good to have readily to hand. Have your breeder on speed dial, and if possible secure an experienced breeder to assist if you are new at breeding. Even if you are an old hand having someone to talk to can be pleasant, but remember many bitches do not like a lot of people coming and going, and may try to suppress labor if there is too much activity. (My bitches seem pretty oblivious to anything happening around them.)

In a process that is not fully understood, it is the fetuses that initiate labor. This occurs in 3 stages. Several days before whelping the vulva enlarges and tail head becomes more prominent. In the first stage the cervix dilates. The bitch is restless and pants often heavily, but strong, coordinated abdominal contractions aren't present. The bitch usually refuses food; if she does eat she will often vomit. This stage lasts about 12 hours, if it continues much longer it is probably a good idea to check in with your vet. Increased stillbirths and neonatal death is associated with stage 1 lasting more than 18 hours. Letting the vet's office know labor has started may be a good idea too.

Stage 2 is marked by obvious coordinated contractions. Once the first pup's head (preferably as it is harder and more stimulating than its butt) moves into the cervix it produces a burst of oxytocin release, which increases the strength and duration of uterine contractions. Without this reflex release, labor may not progress. Prolactin is also released at this time to kick in the bitch's mothering behavior and stimulate lactation. Stage 3 is marked by the delivery of the first puppy. (Stages 2 and 3 alternate until all the puppies are delivered). A lot of clear fluid precedes the arrival of the puppy. Green fluid indicates separation of a placenta, and may occur before the first puppy arrives. There may also be some bleeding associated with separation of the placenta. This is all normal, although if there is a lot of green fluid and no puppy for a couple of hours contacting your vet would be wise.

Pups may be born still tightly wrapped up in the membranous sac or this may tear free in the vaginal canal. (Some puppies may even be heard protesting violently as they come down the chute.) If the sac hasn't torn free, either you or the bitch will tear it off. Bitches generally will lick the puppy vigorously, stimulating them to breath and tearing off any membranes. I have never had a problem letting my bitches consume all the placentas. Rarely one comes back up, and is then swallowed again before I can get to it. I do keep my fist around the cord so that the bitch cannot crop it off too short. If this happens it may result in an umbilical hernia. If the puppy has fluid in its airway (raspy sound) you can clear out the back of the throat with a bulb syringe. Do not swing the puppy vigorously as recommended in some texts as this can lead to brain damage. You can hold the puppy upside down and rub its body with a terry cloth towel to stimulate the puppy to breath. If this doesn't get it started, you can blow air into its nostrils, perform CPR (simple directions can be found at http://www.peteducation.com/article.cfm?cls=2&cat=1651&articleid=896) or insert the acupuncture needle in the tissue between the nostrils (Jen Chung site) and twist as you reach the bone.

Do not be overly concerned if you don't find a placenta with every puppy. Some come out attached, but many will detach, and often come out in a bunch, so that the bitch can slurp them down before you get a count. Puppies may also share a placenta. Retained placentas are usually broken down and passed in the normal placental discharge, although they can sometimes cause problems.

In my experience most Beardie bitches can get carried away with the washing of the puppies, and no sooner have you got them dry but they are licking away again. Some bitches will let you put the puppies in the ready box to dry and keep warm, others become distressed even if you take away one of many. If you encounter a problem of course, putting the healthy newborns somewhere safe is a must, however. On the other hand, encouraging the newborns to nurse not only ensures they get the colostrum they need to thrive, but also causes further release of oxytocin to keep labor ticking along, and after everyone is delivered helps the uterus continue to expel its unwanted contents and cause it to return to its prepregnancy dimensions (involution). Encourage all puppies to nurse, and observe whether they do so with gusto and good suck reflex, or if they fall off the nipple as soon as you attach them.

Each bitch proceeds at her own pace. Intervals between puppies can vary from a couple of minutes to a couple of hours. As long as the bitch doesn't seem distressed and/or exhausted all is probably well. Offer her a bowl of water laced with Karo syrup if she seems at all fatigued, it's a wonderful pick-me-up, although the puppies do tend to look like you put gel in their hair! Try taking the bitch out to relieve herself if labor has slowed down. Walking may stimulate labor. If it is dark be sure to take a flashlight in case she pops out another puppy, and take along a towel to wrap it up in too.

Determining when a bitch has finished whelping can also be difficult. Most bitches don't really settle down to rest unless they are all done. When palpating you can miss a puppy still up under the ribs, and the involuting uterus may be mistaken for another puppy. Radiographs are definitive. It used to be commonplace to inject a bitch with oxytocin when it was felt whelping was complete to help her uterus involute and expel any remaining puppies as well as retained placentas, and to stimulate milk let down. This practice has fallen out of favor, and if done at all far smaller doses of oxytocin are given.

In part 2, I will look at potential problems during labor and with neonates, postpartum care of the bitch and puppies, and raising the puppies until they go to their new homes.

Art, Science and Expectation in Veterinary Diagnosis
Linda Aronson, DVM

One of the most serious limitations to any health registry is that it is only as good as the data collected. Data can, as has been mentioned several times in this newsletter, be skewed if predominantly sick dogs are included in the database rather than a broad sampling of healthy as well as sick dogs. Another unfortunate problem arises because not all conditions are accurately and quickly diagnosed. Many diseases have borne the epithet of "The Great Imitator," meaning that diagnosis is hampered due to difficulty in distinguishing them from other, perhaps more common, ailments. Two which are of particular interest to the breed are Addison's disease (more accurately hypoadrenocorticism) and systemic lupus erythematosus (SLE). Virtually every veterinary journal for the past year has carried an ad with the headline:

"*If you're not looking for it, Canine Addison's Disease can hide in plain sight. Addison's disease has been declared the most under-diagnosed endocrine disorder in the United States.*"

It seems strange maybe to the readers of this publication, but there are still a lot of beardie owners unaware of the problem in the breed, and without their guidance many veterinarians may not be tuned into look for the disease still until it is too late. I recently suggested to an owner that one rule out for her dog's signalment would be SLE, and this proved to be the case. Her veterinarian told her that SLE is a really rare condition and he'd never diagnosed it before. Unfortunately, it's not that rare, but if you don't look for something you are unlikely to find it.

In veterinary school, students are instructed: if you hear hoof beats don't go looking for zebras. Unfortunately, this may mean that despite the appearance of stripes the exact nature of the beast is overlooked in favor of

a more common condition with which the veterinarian is familiar. Some will give up, saying diagnosis is impossible or too expensive, and it is better to treat empirically. This may or may not work; some dogs get better while others do not. In the latter case, some owners may be left feeling that the problem is beyond help and either euthanatize the dog or live with the condition as best they can. In such cases a second opinion may be helpful especially if a specialist is consulted. Some dogs may get better despite the treatment, and the opportunity for accurate diagnosis is lost

Even with the right diagnostic information available, some will still misdiagnose. Not every case reads the text book and presents perfectly with all signs; diagnosis is as much art as it is science. In many cases one is left feeling like a detective following the clues and hoping to come up with the correct perpetrator. However, in real life we know the wrong person may be convicted of the crime, or the person responsible never found, and in medicine (human and veterinary) the wrong diagnosis may be made, or no disease will be found to explain the particular problem. Here another veterinary school chestnut may act as a road block. We are told to always try and come up with a single diagnosis, and not look for multiple causes for a problem. In many cases this is sound advice, but if taken to the extreme a patient suffering from multiple ailments may be shoe-horned into a single ill-fitting diagnosis.

This is not to devalue the importance of the Open Health Registry. The more dogs included then the less likely it will be that a few dogs that have been misdiagnosed, over- or under-diagnosed will skew the data. It is necessary to examine the data with a critical eye, and not assume that every veterinary diagnosis is 100% complete and accurate. The more data backing up the conclusion, including necropsy when appropriate, the more certain we can be that the correct conclusion has been drawn. The Open Health registry helps in another very important way. Looking at the data presented, particularly within our lines, we are better informed clients. We will be able to tell our veterinarian of the more obscure diseases that plague the breed and our own line of dog so that we can reach an appropriate diagnosis and start treating in a more timely fashion. The weight of medical information is over-whelming, and any help with useful "leads" can speed the process of cracking the case or even be the difference between success or failure in reaching a diagnosis. With the OHR, the Internet and improved communication we can work with our vets to help solve presenting diagnostic challenges. We are our own and our animals' best advocates as we have the greatest investment in their health. We can also use the data in the OHR proactively. We can research problems and find measures that can be taken to prevent our dogs succumbing. The OHR helps us refine our focus, and identify the conditions most likely to become problems for our own dogs.

Veterinary diagnostics is part science part art; it's also part skill and part luck, but that doesn't mean we can't swing the balance in our favor. To the best of our knowledge and that of those submitting data to it, the contents of the OHR are correct; however errors and oversights can creep in through incomplete information or inaccurate diagnosis, so –as with most things - data is not guaranteed. It is useful to bear this in mind when studying the information contained herein. Caveat emptor.

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SPOTLIGHT ON
KAREN DRUMMOND
By Chris Walkowicz

Karen was a deprived child as her mother was not a dog lover. She acquired her first dog, a gray Lhasa Apso named Bilbo, after she married in 1972. Her internship with dogs also included Sam, a parti-color buddy of Bilbo's, and two Tibetan Terriers.

She obtained her first Beardie just twelve years ago. A true patriot, his birthday is on the Fourth of July. A year later, she acquired her foundation bitch from Gail Romine, who remains her friend and mentor.

Her five Beardies at home have the benefit of her background as a clinical psychologist. She obtained her Ph.D. in Clinical Psychology from Oklahoma State U. in 1974. Her patients are some of the luckiest people in the world – in addition to Karen's skills, they have Beardies soothing them when they visit Karen's office in Columbia, SC. Originally, as her specialty is treating anxiety disorders, she brought her Beardies with her to desensitize children who had been mauled by dogs and were terrified of all canines. She says, "The other clients so enjoyed having them there that they virtually demanded that I bring them (the dogs), and since then the older generation has taught the young generations what office manners are."

Shadowfax Beardies rarely have puppies – only three litters in ten years. Karen has kept one from each litter, making her current population at its max of five. Three of these are Champions. Like many Beardie owners, she participates in other activities as well. "Of the five, we have three CDs, and two of the other youngsters are in classes. My two older girls have their Open Standard and Jumpers titles. The "baby," who is three years old, is in her second set of classes. Four of the five have their instinct certification." All this in addition to their "unofficial" titles as pet therapists!

Although she doesn't have a lot of time for hobbies non-doggy, she enjoys reading and digital photography. Karen is thankful that her spouse is tolerant of her obsession. She says, "He loves the dogs, but would find watching a wall of paint drying more interesting than attending a dog show!"

A member of the BCCA, Karen is the Past President and secretary for the Carolinas BCC and is also a member of the Central Florida club, as well as a local obedience club. CBCC is lucky to have her write a column on health and safety issues for their newsletter. She's also the area rescue contact for South Carolina. As Secretary of BeaCon she says, "I've been involved in BeaCon since the inception as I had a very strong belief that the only way to preserve this wonderful breed is through the open exchange of health information, and I felt compelled to put in whatever effort I could to make this happen."

She believes in the importance of the Open Health Registry because "without information, breeding is a total crap shoot; you roll the dice and cross your fingers. With information, one can make much better and well-informed decisions, and my belief is that this breed deserves this from (us) humans who are the guardians of their future."

A member of both BCL and BDL, Karen loves to talk to people who contact her about health via e-mail, phone, snail mail, or in person. She's also concerned about the breeding of dogs of average structure – rather than superior – as well as the tendency to breed to the big winners. She's afraid this will "create one of those genetic bottlenecks that threaten the health of the breed." And she worries about Disney making a movie about Beardies, thus making the breed over-popular like the Dals.

Mainly, Karen "would like to see breeders put aside egos, politics, and their fears and focus on the welfare of the breed and participate in the registry. Doing so is the only viable way to exchange information at this time, and failure to do so will be likely to result in an increase in the already inherent genetic problems."

"Nothing in the world is so powerful as an idea whose time has come."
Victor Hugo

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Http://www.beaconforhealth.org/

E-Mail Contest

Don't forget, if you elect to receive your copy of the BeaCon Newsletter by e-mail, you will be entered into the drawing for some great Beardie "stuff". Just contact the editor at;

grfitz@bellsouth.net

to get your name on the list. Not only can you win a nice prize, but the postage saved can be used for health issues. Thanks!

"The sea is dangerous and its storms terrible, but those obstacles have never been sufficient reason to remain ashore...unlike the mediocre, intrepid spirits seek victory over those things that seem impossible....it is with an iron will that they embark on the most daring of all endeavors....to meet the shadowy future without fear and conquer the unknown."
Ferdinand Magellan,
explorer (c. 1520)

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Check out BeaCon's November Auction for great gifts.
Begins in mid-November.
Among the items to be offered are:
The James Beardie Cookbook (LeRoy)
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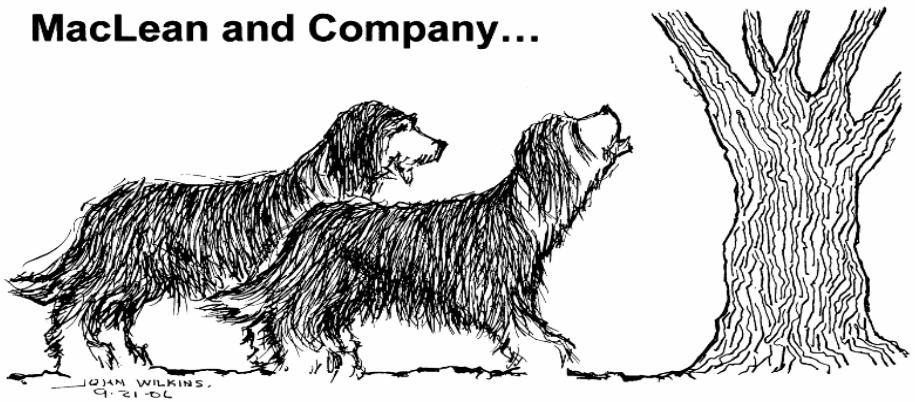

"...and this is our family tree!"