

Hill Walking Dogs - Some Thoughts From a Farming Perspective

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By way of background introduction:- as a family we have been tenants on the Crown's Glenlivet Estate since my late father-in-law took over the farm in May of 1953 when my husband was 7 years old. We have 2250 acres of heather hill, six miles away from the farm proper, which is used for summer grazing for our flock of Scottish Blackfaced sheep. There is an old shepherd's cottage on the hill which, prior to 1953, was the summer residence of the farm shepherd while the sheep were there but, with all the farm labour required at home, it became surplus to the farm's needs as my father-in-law drove daily to the hill to check up on the sheep. Many walkers pass through the ground and the cottage is now frequently used by them as a bothy while my husband (who now does the shepherding) enjoys his daily visit and the chance meetings with many interesting people enjoying the peaceful environment. The cottage is basic but he has tried to make it wind and water tight with some added comfort of redundant furnishings from home. The visitors' book clearly illustrates the pleasure it provides.

The Land Reform (Scotland) Act 2003 set out the rights of all those who use the countryside of Scotland, whether for recreational purposes or as land managers who may make their living from that land by farming, forestry, fishing or other such use. Unfortunately, many in the media frequently refer to the "right to roam", which can lead to potential conflicts between the few who believe they have an absolute right to total freedom in the countryside, regardless of the needs of others, and the managers of the land in question. The right of public access is correctly qualified by the word "responsible", so both access takers and land managers have to take responsibility for complying with the Scottish Outdoor Access Code; it is a two-way arrangement. (www.outdooraccess-scotland.com) Most people who take their dogs into the countryside do behave with respect for their surroundings but a few cause difficulties not only for land managers, but also potentially for other recreational users including others with

dogs. The Code says "Access rights do not extend to... anyone responsible for a dog which is not under proper control..."

From a hill farming perspective the issues with dogs come from a number of concerns. Livestock worrying can be traumatic when untrained dogs are let off the lead to chase whatever catches their eye, whether birds, deer or farm animals. If the dogs do not respond to owners' commands to return, they need to be kept on the lead until such time as they learn the discipline. It is perfectly legitimate for land managers to shoot dogs found marauding stock or, alternatively, to prosecute the owner in a court case.

Livestock farmers will vaccinate and treat their dogs routinely for worms, not only as a matter of good husbandry, but also by being compelled to as members of food quality assurance schemes, so it is only right that dog walkers using our ground do the same for our animals' well-being. If a farm field which holds livestock is to be used for a public event, it must be closed off to stock for 3 weeks beforehand. This is for the protection of the people attending the event. Some irresponsible dog owners see no similarity between this and the consequences of leaving their dogs' excrement to the extreme inconvenience of other recreational users of the land. But being responsible only needs a little forethought and consideration for others. When out walking it is not difficult to carry a plastic bag to use for picking up behind the dog, to avoid the upset caused to others who may inadvertently step in the excrement, or worse, become infected with any one of a number of potentially harmful parasites. But it is not only dog excrement that is offensive. Taking rubbish home is not just about potential litter. Farmers have encountered used toilet paper blowing in the wind on the hill and, for example, have experienced a collie dog which chose to roll around in human excrement. It had to be scrubbed before getting back in the land rover for the 6 mile drive home. (*Guidance available in a leaflet called Where to Go in the Great Outdoors.*)

While I have no desire to terrify every dog owner so that they never take their best friends hill walking again, I think it is worth highlighting some of the potential hazards – diseases - confronting visiting dogs, (some of which also affect humans). Many are present on urban streets. They can be picked up from deer, rabbits', cats' and other dogs' faeces as well as from vegetation or drinking water both

stagnant and running. It is worth carrying bottled water for a short day out but if you take a stove remember to boil enough water for the dog too, for the following reasons.

Cryptosporidiosis is the disease caused by infection with the protozoan parasite *Cryptosporidium*. There are many species of the parasite, found in various mammals, birds and reptiles but fortunately not all of them cause disease. The oocyst or egg is the infective part of the life cycle. It has a very tough outer shell and survives well in the UK climate, particularly in mild and humid conditions, and can remain viable for over a year in soils, pasture and water, being resistant to water chlorination treatment and other disinfectants. One species, *C. parvum*, causes clinical disease in cattle but is generally found in calves less than 6 weeks old and is zoonotic. Usually mild in humans, the disease manifests with self-limiting diarrhoea, abdominal pain and dehydration. However, in vulnerable people e.g. the young, elderly or immuno-compromised, it is potentially very serious. At present there is no vaccination to prevent the disease in farm animals, and in the hill environment deer and other wildlife are outwith any veterinary management the farmer can provide.

Toxoplasma gondii is the most successful protozoan parasite worldwide and is capable of infecting all warm-blooded animals including humans. Members of the cat family are definitive hosts of the parasite and infected cats can shed the oocysts in their faeces. These can survive in the environment in moist temperate conditions for 12 – 18 months. Sheep pick up the oocysts from pasture or water and once ingested the parasite multiplies within the host and persists within tissue cysts in the brain, heart and muscle. In the naive pregnant sheep *Toxoplasma* can cause disease in both the placenta and the foetus, resulting in abortion or still birth. It is particularly important for women who may be pregnant or immuno-compromised individuals to avoid any contact with ewes and lambs around lambing time as they can suffer the same effects. Eating undercooked meat which might contain parasite tissue cysts is a major risk for these groups also.

Neospora caninum is a protozoan parasite found in dogs but worldwide it is recognised as one of the major causes of bovine abortion. It can only live and multiply within the cells of an animal. While similar to the *Toxoplasma* parasite, there is no evidence to

show that *Neospora* can infect humans. A naive dog becomes infected by eating meat already containing tissue cysts such as that from abortion cases, placentas, wildlife or water – easily done on the wild hill. Once infected, the parasite may establish itself in the gut cells of the dog where it will multiply and re-infect more gut cells. This leads to the production of parasite oocysts which will be shed in the dogs' faeces around 3-9 days after infection. This will continue for 2-3 weeks after which time the dog's immune system usually manages to control the gut infection and the production of oocysts ceases. It is thought that the host animal does not shed significant numbers in the event of further infections. *Neospora* oocysts are usually only detectable in the faeces after the first exposure of the dog to infection so, generally, only young dogs are involved. The oocysts can stay infective for many months in cool and moist conditions but can be killed by heat, freezing or drying. Many wild animals have been shown to act as host for *Neospora* but only dogs are proven to shed the oocysts. Thus they are the only known infection route for cattle. As yet there is no licensed vaccine in the EU.

Toxocara canis is a Nematode parasite most dog owners will know as dog roundworm. Toxocariasis is caused by ingestion of the larvae of the dog roundworm *T canis* or the cat roundworm *T cati*. The soil of parks and playgrounds is commonly contaminated with the eggs of *T canis*, and infection may cause disease in humans that involves the liver, heart, lung, muscle, eye, and brain. Awareness of this has been promoted in the public domain by the growing knowledge of ocular larva migrans, a condition caused by the migration of larvae into the posterior segment of the eye. It tends to occur in older children and young adults. Regular worming of household pets, along with scrupulous attention to hand washing around food, is the best strategy for avoiding the infection.

Stagnant water in ponds, lochans or boggy land can be affected by algal blooms during long dry spells. In the case of humans, contact with blue-green algal blooms and associated scum should be avoided as skin rashes may occur if affected water is in direct contact with the skin and illness may occur if the water is swallowed. Do not allow dogs to drink from, or attempt to cool off in, affected water as the consequences can prove fatal.

I hope the above information is helpful to those who enjoy the company of their dogs in the great outdoors. Do not be frightened by the facts, but take sensible precautions to avoid illness in your dog, yourself and the people who follow in your footsteps, so all can continue to benefit from a pleasurable experience.

In summary; responsibility includes picking up after the dog, keeping to a regular worming programme, being aware of other animals in the area and behaving appropriately. Keep dogs under close control, using a lead when necessary near livestock and particularly when there are lambs or calves around. There is plenty of advice available from your vet practice or dog training classes and, for much more in-depth knowledge of the disease threats, the organization Moredun (<http://moredun.org.uk/>), founded by Scottish farmers, is the body at the forefront of research.