**Wedge-tailed Eagles predating on sheep with ‘Ryegrass Staggers’**

In late February 2012 Tasmanian wildlife authorities received a complaint that numbers of wedge-tailed eagles were attacking sheep suffering from ‘ryegrass staggers’ east of Oatlands in the Tasmanian midlands.

Here is some interesting background to the problem, much of it from Meat & livestock Australia 2007. Ryegrass staggers (RGS) or more accurately, ryegrass toxicoses, is a condition mainly of parts of southern Victoria and Tasmania, that effects sheep, cattle, alpacas and deer. It is caused by eating ryegrass Lolium perenne that has an endophitic fungus Neotyphodium lolii growing on it which produces a potent alkaloid. The fungus concentrates particularly in the seedhead and crown. Its worse when grazing old varieties of ryegrass that have higher endophyte levels. For many years Victorian Ryegrass was recommended in low rainfall areas due to its ability to withstand drought better than other ryegrass varieties at the time and this variety has high endophyte levels. Over time as newer types of ryegrass are planted, RGS should reduce. Sheep are particularly sensitive to the alkaloid and after eating a small amount of infected grass they can become uncoordinated, especially when stressed. An affected flock can appear perfectly normal until the animals are stressed or frightened and then the symptoms explode in a dramatic way. The danger ‘package’ is lush spring growth followed by a warm wet summer and hot dry autumn, usually December to May. Local susceptibility usually only lasts a few weeks (the fungus disappears) and effected sheep make a full recovery within a day or so of ceasing eating that grass.

Experienced farmers suggest its been a bad year for ‘the staggers’ (nothing about rural parties) right through Tasmania’s midlands where many of some of Tasmania’s oldest sheep properties are. Charlie Lewis, an experienced dryland farmer , suggests having a paddock or two of newer, low endophyte, ryegrass varieties planted so that there is somewhere to put the sheep during bad periods of RGS. Alternatively, have paddocks of cocksfoot, phalaris and other varieties available for grazing during susceptible periods. Mixed pastures seem to work well at Cambridge, a corner of south-eastern Tasmania with many environmental conditions similar to the midlands. If moving sheep is left too long then its not possible to shift them as they get the staggers and fall over. It can be better to just opening the gate and hoping they will move through because they cannot be driven without falling about. Any form of mild stress seems to bring it on the condition.

On a lighter note, it has been reported putting a ram in with some ewes during the mating period can cause hilarious antics if RGS is in evidence. The ram can get mildly stressed before he mounts the ewe. He falls over. The ewe then misses out, so she becomes stressed and falls over too. They usually get up after a few minutes and repeat the performance. There are of course parallels, but let’s not go there.

While this toxic chemical doesn’t itself kill the animal eating the grass, it can cause all sorts of loss of condition and stress, even starvation and their uncoordinated (‘drunken/drugged’) condition, especially when stressed, predisposes them to accidents, some fatal, eg f they fall over in places such as waterholes, then losses are common. In 2002 Victoria an estimated 100,000 sheep and 500 cattle died of the syndrome in 2002.

As this note suggests, it also may make them more prone to predation, eagles of course, being professionals at taking advantage of such problems and I have heard the same thing about Tasmanian devils.

We (wildlife authorities and those of us interested in positive management of wildlife) have put enormous effort over the past decades into reducing persecution of eagles in Tasmania. Part of that effort is to respond to complaints of stock predation/harassment, both to see how legitimate the complaints are and to see if we can do something to reduce the problem. Typically we issue permits to scare eagles by the discharge of firearms and recommend the louder the better and being aggressive in places the eagles are not wanted (eg lambing paddocks). That way, even resident adult eagles can be discouraged from using certain areas of a farm although tolerated in the general farm area. A high-powered rifle shot into dead wood of the tree near where the eagle(s) is sitting is ideal; a kind of ‘turbo-scarecrow’ management. The technique involves pursuing the eagles and disturbing with a shot then each time they come to rest in the vicinity of the stock. The permit is both to show we take the issue seriously and to protect the permitee from accusations they are shooting *at* the eagles. It is all about training the eagles that people, their infrastructure and certain places are bad news, something eagles often do not know now that they are shot at much less.

As Bill Brown points out, this harassment process is similar to the way ravens and other birds mob raptors. Raptors often hunt by surprise and if their ‘cover is blown’ by a flock of noisy ravens then they will generally move on to where conditions for hunting are more favourable. If humans continually disturb the ‘problem’ eagles even when there is abundant food they will usually move to an alternative location. Our feedback indicates that it usually takes a week or two to train the local eagles and the technique can move on some eagles (presumably vagrants or ‘floaters’ with relatively little motivation to stay) and is effective at reducing stock losses to eagles. Landowners experiencing this problem need to be vigilant and determined in the initial period to minimise lamb losses. Where only one or two eagles are involved the birds are generally moved-on quickly. Occasionally, particularly in paddocks that are regularly used for lambing, the same eagles will return in the following lambing season. However, if the technique is repeated the birds are again moved-on. It is important to act as soon as possible on the discovery of predation of lambs so that the eagles don’t develop the habit of taking lambs, perhaps forming a ‘search image’. The longer the behaviour has been practiced the harder it is to break.

The complaint leading to this discussion was that eagles were harassing flocks of sheep (actually large lambs of up to about 25kg) and then attacking some that showed lack of coordination (some even fall and can’t get up), the landowners being well aware the problem being due to a local outbreak of RGS. Bill Brown of the Department of Primary Industry, Parks, Water and Environment visited the landowner, arranged for a ‘shoot to scare’ permit to be issued and provided some bird fright cartridges. Compliance Officer (aka Wildlife Ranger) Glenn Atkinson (very experienced) and Game Management Officer Matt Byrne (relatively new to the issue) visited the property in question (I would have too except I am no longer with the department and didn’t want to complicate the issue). Bill is very experienced with eagle management, Glen has been managing wildlife for decades and is an excellent observer, interviewer and recorder and Matt is right in amongst it too; so a good crew. The landowner reported that just over 100 sheep (large lambs) were apparently killed, probably all of which would have otherwise survived that period. Glen saw up to 12 wedge-tailed eagles on site at once, mostly immatures.

The general area has always had large numbers of wedgies; I saw a photo of 14 and heard a report of 17 – it is open woodland with lots of hares and rabbits and many thousands of wallabies and brushtail possums are shot (as competitors for sheep and eaters of crops) and left in situ. Rangeland grazing of sheep for super-fine wool also means a fair bit of carrion via natural deaths. These days, such carcasses are even more available to eagles since devils have declined due to Devil Facial Tumour Disease. Glen witnessed a classic eagle attack as reported by the farmer; a wedgie doing a long, fast glide very low over an affected flock, apparently ‘pushing’ them to see if any would fall. Glen checked with other landowners who have recently had ‘shoot to scare’ permits to fine-tune his advice. Glen and Matt actually carried out some of the scaring so they could see its effect (or not) for themselves. After a week of such scaring by the farmer the report was that about half the eagles had moved away and the others seemed more cautious although several months after RGS was first seem, some sheep are still showing symptoms and the odd one is still being killed by the eagles according to the farmer

This particular case was unusual in that it involved so many eagles. It seems worth noting that these eagles were only a problem while ryegrass staggers was obvious; they were not regarded as day to day problems or problem eagles per se. The patience and cooperation of the landowner is also worth noting (and appreciating!).

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Right amongst this I received in for rehabilitation a perfect immature wedgie and an equally good conditioned marsh harrier from none other than the place where all the staggering was, caught by hand seemingly ‘drunk’. After a day in a rehab aviary both seemed fully recovered and I wonder if it was secondary poisoning from the alkaloid in question via eating dead sheep, the raptors themselves having ryegrass staggers (I’m glad a brown falcon wasn’t involved – they’d be terrible drunks!).

I can find no records of such secondary poisoning and would love to hear from anyone who does have records

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