

## **WILDLIFE HEALTH FACT SHEET**

### **“WINTERKILL” IN COASTAL BLACK-TAILED DEER**

This fact sheet gives an overview of the increasingly common issue of **deer in poor health during the late winter and early spring in and around coastal British Columbia**. Some of the information can also be applied to many wild animals during extreme and persistent inclement weather conditions.

The south coast of British Columbia has one species of native deer, the coastal black-tailed deer. The population density of deer varies significantly throughout its range on Vancouver Island and the coastal mainland. They are at moderate to high density on some islands and increasing in some semi-rural, suburban and even urban areas on Vancouver Island and the Fraser Valley. In these areas, deer now inhabit a new type of habitat for the species, sharing fields with domestic livestock and using cultivated landscapes such as golf courses, gardens and shrubs for feeding, in some cases on a year round basis. The lack of natural predators and milder winter conditions in rural and suburban areas also supports increased numbers of deer living near humans.

Every year Ministry of Environment staff and the concerned public report a variable number of deer, particularly the young of the previous year, showing one or several signs that can indicate poor health. These include:

- Loss of fear of humans
- Weakness and presence near homes, on porches, in outbuildings
- Poor to extremely thin body condition
- Poor hair coats – from small areas of hairloss to almost completely bald
- Digestive tract upsets – especially diarrhea, seen as green soft to liquid feces on the ground or coating the tail area
- Death with no apparent warning, especially after a period of supplemental feeding

Surprisingly, there is no evidence that these deer suffer from infectious diseases, but there is indication that the **poor health is associated with high deer density and seasonal nutritional issues**. It is difficult to do laboratory analyses on all deer reported in poor health, but the analyses done so far do not show infectious diseases other than high numbers of parasites in some animals, both in their intestinal tracts and on their skin. And these parasites do not appear to be the primary cause of their ill health but just one of several factors.

Deer that live at low elevation on the coast are born over a more extended period of time than other populations. This results in fawns born later in the year that are typically very small as winter approaches. When they live in habitats that are partially or highly disturbed and not considered natural to them (i.e. farmlands, , gardens, golf courses), they feed on many types of vegetation that may or may not provide proper nutrition. Deer evolved as browsers of native shrub-like plants more than grazers of grasses. Even if their nutrition was the very best, any animal entering the most nutritionally stressful time of the year (i.e. winter) at a small size will be highly stressed. These small deer must not only maintain their weight when the weather is cold, wet and windy, using large amounts of energy, but also invest energy in growing muscle and bone. A very high quality and quantity of nutrition is needed to grow and maintain weight during our wet and windy coastal winters.

There are a number of other animals that live on or in our coastal deer. Several species of ticks, lice, deer keds and internal parasites are normally present in most deer populations. In a highly stressed young animal that may not have the energy to move around much, and in a high density population, the

numbers of parasites on each animal are more likely to increase. The parasites alone - or the combination of them and the nutritional challenges the animals face - can be enough to push struggling young deer “over the edge” and show the signs of poor health noted above.

For many people the solution appears to be to give deer a “high quality” feed when the weather worsens – that is what we would do for our livestock, pets or ourselves. However, for any animal in a negative energy state, even for a horse or a dog, changing to a positive or weight gaining state can be a challenge. For a wild animal that did not evolve to eat a high carbohydrate diet of grains and rich feeds such as apples, grasses and alfalfa, the result can be a slow death. They cannot adjust to and digest feeds that they are not used to, and the result can be diarrhea, impaction (severe constipation) and a worse situation than before. In addition, the provision of supplemental feeds creates another challenge - further increasing animal density and the reliance on unnatural feeds - increasing the likelihood of parasite or disease transmission and further degrading the existing habitat.

Both parasites and improper feeds – too rich or too sudden a change – can start the diarrhea, weight loss and other metabolic changes that can end in emaciation and death. Once they are in this state they cannot be medicated into health – any handling or intensive care causes extreme stress and usually results in death. Many die as a result of end-state metabolic problems such as hypothermia (low body temperature), hypoglycaemia (low blood sugar), or exhaustion, and all of these, if not fatal, add to their stress.

Please do care for these animals by reporting their condition to the Ministry of Environment – we are interested in tracking wildlife health and sampling specific animals. But please do not add to the problem by providing supplemental feed to deer at any time of year – you may be “killing them with kindness”. Help us keep BC wild animals wild and healthy.

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<http://www.env.gov.bc.ca/wld/wldhealth.html>

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