



Deer Plan Oak Bay

A campaign of the
URBAN WILDLIFE
STEWARDSHIP SOCIETY

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Urban Wildlife Stewardship Society SCIENCE BACKGROUNDER

The first objective of the Urban Wildlife Stewardship Society (UWSS) is our Deer Plan Oak Bay project to stabilize the deer population in Oak Bay using immunocontraception. As part of the project we will also determine deer numbers through a scientific deer count, observe the movement patterns of deer, and work with others to effectively educate the general public on how to co-exist with deer.

Over the past 25 years, the use of vaccines to control fertility in deer has emerged as the preferred approach. Immunocontraception uses vaccines to produce antibodies that target the reproductive system. The most promising contraceptive is a vaccine called SpayVac, which is a Canadian innovation and has been shown to prevent pregnancy for many years.

SpayVac produces natural antibodies in the blood, just like the flu vaccine in humans. The antibodies bind to the surface of the female egg and prevent sperm from fertilizing it. With a single vaccination, most does will not get pregnant again in their average lifetime of 5-7 years.

To administer the vaccine, experienced biologists will capture deer humanely using baited Clover traps—frames covered in soft netting. Once a doe is captured, a biologist will approach as quickly and quietly as possible, physically restrain her and blindfold her to keep her calm. She will be injected with the vaccine, a visual tag will be clipped into each ear and she will be released. This only takes a few minutes.

Any male deer caught will be ear-tagged and released. Female fawns will be vaccinated. In the unlikely event we see a treated female with a fawn, we will administer a booster shot from a distance without having to recapture her.

We estimate that 25 to 30 per cent of female deer need to be treated to curtail population growth and with more, the faster the population decline will be. We don't need to capture them all at once and can vaccinate deer in subsequent years.

On James Island off Sidney, BC, SpayVac was used on the overly abundant fallow deer. It was 100 per cent effective, meaning that after five years the injected deer were still carrying the antibodies that prevent pregnancy and no fawns were born over a six-year period. An experiment in Maple Ridge, BC, with black-tailed deer proved similarly successful.

The UWSS science team has already initiated the process of applying to Health Canada for an "Experimental Studies Certificate for a Veterinary Drug." We will also apply for a permit from the province to capture, handle and tag deer.

The scientific activities of the UWSS are being led by deer biologist Rick Page and guided by a Scientific Advisory Group made up of two ecologists and an economist from the University of Victoria, a veterinarian, an experienced deer biologist and SpayVac for Wildlife president Mark Fraker, a biologist who has conducted three other SpayVac projects in BC.

Black-tailed Deer Basics

Oak Bay has been home to deer for thousands of years. Columbian black-tailed deer (*Odocoileus hemionus columbianus*) range along the coast from BC to California and are found throughout Vancouver Island. Black-tailed deer are a subspecies of mule deer, like the much larger Rocky Mountain mule deer found in the interior of BC. Coastal deer typically weigh 40-80 kg with males being much larger than females.

Deer are browsers, meaning they primarily eat the leaves and twigs of shrubs or trees. They rarely eat grass like grazing animals such as Roosevelt elk. When you see deer nibbling on a lawn they are selecting the clover and other herbs, not the blades of grass. This makes their food habits particularly distressing to some gardeners because deer will eat fruit trees, roses and flowers. Tulips are a springtime favourite.

Females breed in their second year and then have one or two fawns every year in June. In the mountains of Vancouver Island, BC government research found that 75 per cent of fawns and 20 per cent of adult females die each year, meaning most adult deer live to 4 or 5 years old. Survival is much better (but unknown) in Oak Bay where there are no predators and there is no legal hunting.

Most female deer live their entire lives adjacent to where they were born. None of the females captured on the Esquimalt naval base during a SpayVac trial in 1999 left the base, whereas males dispersed, some as far as Prospect Lake.