

# yilíkwłxkn (Bighorn Sheep)

## Psoroptic Mange Initiative Information Update



### BACKGROUND

Since time immemorial, yilíkwłxkn have been integral to the Syilx people. They symbolize a deep, interdependent relationship with the tmxʷulaxʷ (land). The ONA has undertaken numerous initiatives to monitor and protect the bighorn sheep herds in the territory from disease outbreaks and is working to improve habitat connectivity. We are currently monitoring and managing diseases found within the herds, including Psoroptic Mange.

#### What is Psoroptic Mange?

Psoroptic mange, caused by mite infestations, severely impacts yilíkwłxkn health, causing sores, hair loss, inflammation, and scabs. In severe cases, thick ear crusts impair hearing, increasing predator vulnerability. These mites, non-contagious to humans, can survive without a host for over a month in cold, dry conditions. As an indicator species, their health reflects the overall condition of their habitat. The threat of diseases like Psoroptic Mange underscores the urgent need for proactive management, as addressing these issues not only safeguards the yilíkwłxkn but also supports the health of other wildlife and livestock in the area.



yilíkwłxkn (Bighorn Sheep) Pens: wind shelter, 2024)



yilíkwłxkn (Bighorn Sheep) Pens: fence maintenance, 2024)



The Syilx Nation continues the work of our ancestors by caring for the land and the living things that inhabit it. This initiative is part of our broader mission of naqsmiʔst ʔəl tmixʷ.

naqsmiʔst ʔəl tmixʷ is an nsyilxcən term that roughly translates to “coming together for all tmixʷ (all living things)”. This phrase highlights our commitment and duty to work collectively on all matters of mutual interest in respect to tmixʷ and tmxʷulaxʷ within the traditional Syilx territory.







## yilíkʷlɁkn (Bighorn Sheep) Psoroptic Mange Clinical Trial

The research proposed here will bring naturally infested bighorn sheep from the affected herds into four research enclosures and treat them with the long-acting ML, moxidectin (Cydectin 2% LA, Zoetis Ltd), a previously tested oral fluralaner treatment, or a combination treatment combining the ML and fluralaner. The information provided by this trial will form the foundation of future disease treatment initiatives. This research aims to provide wildlife managers with effective treatment options and information on the period of protection that animals could have before the first animals become susceptible to re-infestation from untreated herd mates. This information will form a crucial part of a future treatment plan for wild sheep populations.

### Project Objectives:

#### 1. Trial and Treatment Efficacy

- Confirm treatment options, dosages, delivery, and efficacy in wild and captive yilíkʷlɁkn.
- In a 15-18 month trial, ~36 Psoroptes-infested yilíkʷlɁkn will be treated in captive enclosures to assess drug effects.
- Assess yilíkʷlɁkn population response to large-scale treatment.

#### 2. Disease Monitoring and Spread Prevention

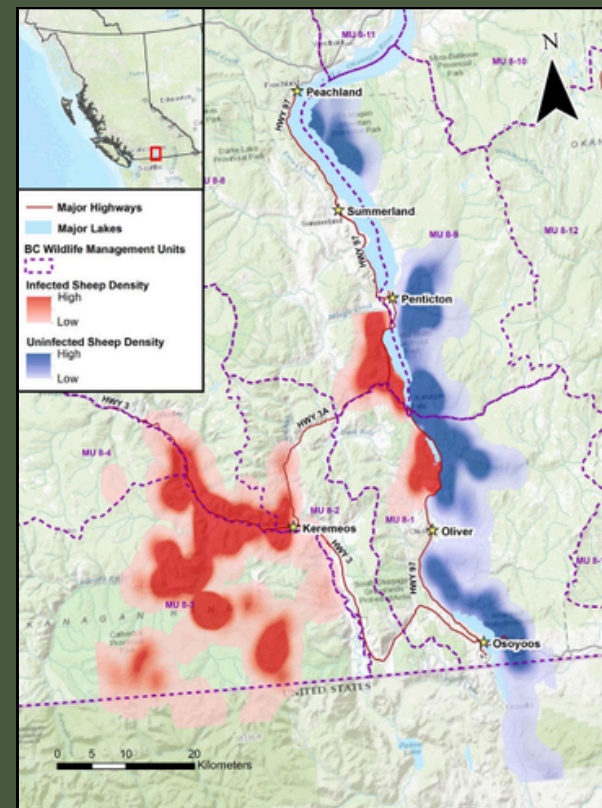
- Monitor Psoroptes spread to uninfected populations in BC and Washington.
- Use ELISA testing to detect infections early and validate their effectiveness for yilíkʷlɁkn.
- Track yilíkʷlɁkn population metrics (mortality, growth) and prevalence in infected populations.

### Expected Impact:

This work aims to establish effective, scalable treatment for Psoroptes in wild herds, advancing adaptive wildlife management strategies for sustaining yilíkʷlɁkn populations across BC and internationally.

## yilíkʷlɁkn Psoroptic Mange Initiative

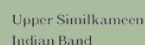
Population of Interest:  
Ashnola/Similkameen  
Population Unit



**Figure 1:** Estimated densities of bighorn sheep with Psoroptic Mange (red) and Mycoplasma ovipneumoniae Bacteria (blue) in the Okanagan Valley. The study this figure is from, can be found at the following QR code.



### Project Partners



**For More Info:**  
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# Frequently Asked Questions

## Bighorn Sheep Psoroptic Mange Trial



### **Are the yilík<sup>w</sup>lxkn that are being captured for the trial ever coming back to their herds?**

Yes! All yilík<sup>w</sup>lxkn will be returned to their original capture locations. Upon release, ewes should be pregnant and accompanied by their lambs. The lambs will receive an enhanced start to life by being raised in secure pens, ensuring protection from predators during their early development.

### **What methods are being used to guide the sheep into the pens?**

yilík<sup>w</sup>lxkn are habitual animals. PIB staff has been working to determine areas where the sheep have been spending time and bait these areas to try to use Corral Traps to catch large groups simultaneously. Once in the Corral Trap, they will be re-located to the pens for the clinical trial.

### **Have there been previous treatment trials?**

Yes! A 2016-2019 trial found that Fluralaner (BRAVECTO™), an oral antiparasitic, effectively treated Psoroptes in yilík<sup>w</sup>lxkn, but the duration of protection was undetermined. Additional trials are needed to refine dosage, duration, and delivery for free-ranging herds.

### **Will there be opportunities to visit the pens?**

Absolutely! Community members will have the chance to visit the yilík<sup>w</sup>lxkn. To prioritize the animals' well-being, we will arrange small group visits that encourage expressions of gratitude, respectfully and thoughtfully. Sharing the work being done by the Nation with the community is a priority,