



South Okanagan Simikameen
Stewardship Program

Living in Nature Series

Working in Snake Country

A guide for agricultural workers

Snakes are generally unwanted in agricultural settings because they are disliked or feared, even though they do not damage crops and rarely impact livestock. This attitude has been a large factor in the significant declines in snake populations worldwide. Snakes play an important role in the environment, being major predators of rodents and in turn, providing food for other predators, higher up the food chain. Each species of snake fills its own specific niche.

There are seven species of snakes in the southern interior of British Columbia. Many of these snake species are encountered in agricultural areas, especially where these adjoin rocky terrain. As in other places in the world, snakes are often perceived as threats, and in some cases their lives are not valued.

Although snakes can greatly reduce rodent populations that damage crops, they may affect agricultural productivity by disrupting work. This is especially true of the Northern Pacific Rattlesnake that is venomous and can be a safety concern. Because many people are unfamiliar with the different snake species, they may not be able to distinguish rattlesnakes from harmless snakes. Methods to deal with the situation often include killing the snake to provide a safer working environment. Non-lethal management of snakes is required to reduce continuing declines in their populations, yet provide a safe work place.

The Wildlife Act prohibits the harassment, killing, or capturing of snakes, unless it is to protect human life, domestic animals, or property. The ease of relocating a snake makes it unnecessary to take severe measures.



Photo by O. Dyer

A harmless Gopher (Bull) Snake caught in bird netting in a garden.

A Northern Pacific Rattlesnake in a defensive posture.



Photo by M. Sarell

Diminishing Snake Populations

Concern about diminishing populations of some wildlife species has led to the development of provincial lists of species at risk. Red-listed species are the most threatened and usually require active management to maintain and recover populations. Blue-listed species are being significantly impacted by human activities, but are thought to still have viable populations throughout at least some of their range. Yellow-listed species are believed to be maintaining their populations. The southern interior of British Columbia hosts one Red-listed and four Blue-listed snake species. The status of snakes of the southern interior is shown in the following table:

Snake Species	Listing
Desert Night Snake	Red
Northern Pacific (Western) Rattlesnake	Blue
Great Basin Gopher (Bull) Snake	Blue
Racer (aka Blue Racer)	Blue
Rubber Boa	Yellow
Common Garter Snake	Yellow
Terrestrial Garter Snake	Yellow



Photo by A. Bezener

*The rare and elusive
Desert Night Snake*

Agricultural Impacts on Snakes

Expansives of land traditionally used by snakes have been developed for agriculture. Snakes often enter agricultural areas that used to be their foraging territories. Cooler conditions provided by irrigated crops in the heat of summer and a greater abundance of rodents than in nearby natural areas may also attract snakes to agricultural lands. Populations can dramatically decline when human land uses interfere with their activities or mortality exceeds the number of young born. Some species of snakes in BC only reproduce every three years and survival rates of young are low.

While road mortality is considered to be the number one cause of death, snake populations may be further reduced in agricultural areas by practices such as mowing, tilling and haying, and sometimes by intentional killing. Slight changes in management practices can alleviate some of this conflict and mortality.



Photo by W. Alcock

Most snakes are secretive and go unnoticed. This is especially true of the Rubber Boa shown in this photo

Snake Management in Agricultural Settings

The South Okanagan-Similkameen (SOS) Stewardship Program is promoting the responsible management of snakes in the southern interior of BC. Part of this effort involves working with the agricultural community. New strategies, particularly for potentially high snake encounter areas, are being developed to reduce the impacts on snake populations and to improve worker safety.



Photos by M. Sarell

Snakes can be moved for relocation by using something as simple as a stick, or as elaborate as commercially-made tongs. Ensure the snake is never within striking range.

The following snake management practices are recommended whenever possible:

- Maintain a natural buffer of at least 100 m from rocky slopes.
- Leave draws/ravines as migration corridors; use culverts or bridges where roads cross these corridors.
- Maintain or enhance existing debris/cover features to which snakes are drawn, thus reducing accidental encounters and allowing easy relocation of any snakes.
- Provide artificial cover objects (e.g., small pallets). These cover objects should be located away from frequented work places and clearly identified so that workers do not accidentally endanger themselves.
- Install snake barrier fencing along the perimeter of an agricultural area. Ensure that there are funnel ports to permit snakes to exit the area. Refer to factsheet developed by SOS Stewardship entitled *Guidelines for Snake Barrier Fencing*.
- Develop irrigation-fed pond(s) outside the snake barrier fencing to reduce the attraction of snakes to irrigated crops.
- Ensure workers are aware of snakes, how to avoid encounters, and how to respond to an encounter. This information can be provided to people taking vintner education courses and to farm workers by producing an orientation package, including on-site instruction, snake relocation techniques and guidelines.
- Avoid killing snakes when driving, mowing, tilling, and haying by checking the area for snakes first; increase the mowing and baling heights where snakes could be present.
- Call in qualified people, such as conservation officers to relocate snakes if necessary. Move snakes towards hillsides, not more than a kilometre away.

Worker Safety

It is important to readily distinguish harmless snakes from the potentially hazardous Northern Pacific Rattlesnake. A rattlesnake can be recognized by its broad, triangular head, the pattern on the back, the broad, dark banding of the tail, and the rattle at the tip of the tail. The following suggestions will help minimize hazardous encounters when working in areas where rattlesnakes may be present.

- Wear rubber boots when working in tall grass or cluttered areas.
- Step on or around debris, not over them, as rattlesnakes may be hidden on the other side.
- Never put your hands where you cannot clearly see if a snake is present.
- Do not harass snakes; they may bite when threatened.

If a worker is bitten:

- Keep calm and minimize exertion.
- Remove all restrictive clothing and jewellery to accommodate swelling.
- Allow the wound to bleed freely.
- Do not attempt first aid; go straight to the nearest hospital or clinic. Phone ahead if possible.
- Have someone relocate the snake if necessary; do not kill it or bring it to the hospital. Medical staff can identify whether the wound is the result of a rattlesnake bite.

Rattlesnake bites can be serious but although 2-3 people are bitten each year in BC, since the turn of the last century, only two have died.

Other Resource Materials

- Snake Smart brochure
- Snake Barrier Fencing factsheet
- Western Rattlesnake – Wildlife at Risk in BC brochure (WLAP)
- Gopher Snake fact sheet (WLAP, CDC)

For more information, contact the SOS Stewardship office at:
27A Front Street
Penticton BC, V2A 1H2
(250) 492-0173

Text, Design by:

Mike Sarell
(ophiucon@vip.net)

Edits by:

S. Austen, A. Bryan,
H. Parsons,
L. Stanlake, K. Holm,
A. Brock

Sponsored by:



Funded through the Agriculture Environment Partnership Initiative, an Agri-Foods Futures Fund program managed by the BC Agriculture Council.



Environment
Canada

Environnement
Canada

Habitat Stewardship Program

